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ABSTRACT

The project report (Project Interact) describes the outcome of 3 years of research on the nature, causes, and consequences of child abuse and neglect. The family as a locus of violence and the frequency of family violence (including homicide, police calls, physical punishment, and child abuse) are considered. Three models are presented to help explain child abuse (the psychiatric model, the sociological model, and the sociological interactional model). The major portion of the report deals with the findings of the project and include the following information: family interaction in two-parent abusive, neglectful, and normal families; a comparison of family interaction in single versus two-parent abusive, neglectful, and control families; patterns of reciprocity between parents and children (including comparisons between abuse and control families and gender comparisons); family interaction and family size (including positive and negative verbal and physical interaction); and life change and perceptions of illness. Included is a case study of a single parent abuse family and presented is a model for intervention for this family. It is reported that the overall level of interaction was lower for abuse and neglect families than for control families; there was a tendency to accent the negative in abuse and neglect families. (BD)

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# PROJECT INTERACT:

## A Study of Patterns of Interaction in Abusive, Neglectful and Control Families

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with

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College of Human Development

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August 31, 1978

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## 1. INTRODUCTION

Child Abuse refers to non-accidental physical and psychological injury to a child under the age of 18 as a result of acts of omission, (technically neglect) or commission perpetrated by a parent or caretaker. Conceptual problems abound in part because we are clearly dealing with behavior which falls along a continuum of caregiver-child relationships. At one end of the continuum we have seemingly innocuous verbal punishment - disparagement, criticism, threat and ridicule. Or, we have fairly typical forms of physical punishment such as the slap on the hand or a swat on the bottom. Then there are forms of physical punishment that exceed current community standards - hitting the child with a closed fist or with an object such as a razor strap, belt, cord or paddle, slamming the child against the wall, kicking him, burning the child with a cigarette, scalding the child with hot water, torturing or even killing the child. It is not always clear where a particular case should be placed on this conceptual continuum. What is more devastating to the development of a child, a single occasion where a parent loses control and slams a child across the room, in the process knocking out a tooth and breaking a child's arm, or the persistent day-by-day, month-by-month, year-by-year use of ridicule, criticism and sarcasm toward that child? Nor is it clear whether acts of omission which are harmful to the child (i.e., neglect) are functionally equivalent to acts of commission that harm the child. This problem of definition and the establishment of a uniform response class is but one of many problems plaguing the systematic study of child abuse. Other problems such as the tendency to dramatize the bizarre and extreme use of physical violence or aggression at the expense of child neglect or more subtle forms of verbal punishment, the tendency to equate child abuse and neglect either with psychopathology, on the one hand, or with poverty, on the other, and the tendency to rely upon impressionistic accounts of behavior also have retarded the accumulation of sound knowledge about the causes, consequences, treatment and prevention of abusive and neglectful behavior.

In this report I shall describe the outcome of three years of research and thinking on the nature, causes and consequences of child abuse and neglect.

## 2. HISTORICAL CONTEXT

A common assumption in research on violence, aggression and severe punishment is that they are abnormal and pathological forms of behavior. Yet when one looks at the evolution of man as a species, these have been common behaviors throughout our history. Evolutionary biologists such as Alexander (1971) and Bigelow (1969) argue that violent aggressive behavior has played a significant role in our evolutionary development. Indeed, they suggest that aggressive behavior was of primary importance in the evolution of our brain capacity and the development of social organization. Whether they are correct or not, the fact remains that when we examine the evolution of mankind using paleontological and anthropological evidence, it becomes clear that aggressive behavior has been with us since the dawn of history (Dart, 1948; Bigelow, 1969; Blanc, 1962; Freeman, 1964).

So far as the record of maltreating children is concerned, again we find that we are dealing with a phenomenon of ancient proportions. When we look at popular fairy tales such as Hansel and Gretel, Little Red Riding Hood, Snow White, The Gingerbread Boy, or The Three Little Pigs, we see children, or their representations, being mistreated, abandoned or eaten. Even that great repository of Judeo-Christian ethics, the Bible, is filled with examples of the harsh treatment of children from their victimization as objects for ritual sacrifice to a demanding and jealous God, to their outright slaughter. It makes little difference whether we look at Old Testament accounts such as the Pharaoh ordering the slaying of all Hebrew children or the New Testament case of Herod commanding the death of all male children under the age of two; the pattern is repeated again and again.

Not only are we discussing a behavior pattern that originated in antiquity, it also has been found, in some form, in all known cultures. As Korbin (1977) has pointed out, the harsh treatment of children can be seen in such diverse cultures as the Enga of Papua, New Guinea, and the Hopi of the North American Southwest. Among the Enga, a child may lose a portion of a finger for a transgression as seemingly minor as intruding upon the mother's garden. Sometimes, the child is even forced to eat the cooked digit. Among the Hopi, whippings at initiation rites of children between the ages of six and ten were often of such severity that they left permanent scars.

Nor is mistreatment of the young limited to that diabolical species, homo sapiens. The sociobiological literature is filled with some rather gruesome accounts of infanticide such as in African lions (Schaller, 1972) and in the Hanuman langurs of India (Hrdy, 1974). The empirical evidence suggests that such behavior is especially likely under conditions of severe stress, scarcity of food resources or a change in the dominance order. Whatever the precipitant, this behavior, though reprehensible by our standards, seems to represent under those circumstances a highly adaptive evolutionary strategy (see, e.g., Barash, 1977).

## 3. THE FAMILY AS A LOCUS OF VIOLENCE

Not only does the mistreatment of children have a long and diverse history, there may even be certain intrinsic characteristics of families, per se, that more or less assure that conflict will be inevitable and the occurrence of violent and aggressive behavior highly likely (Gelles and Straus, 1977).

## 3.1 Conflict of Interests

The family is probably seldom the site of parents and children constantly united in the joint pursuit of individual and collective goals, as portrayed in the heart-warming sagas of television. The husband-father having just struggled through a tedious day at the office or through eight hours working out in the rain may want nothing more than a cold beer and a period of relaxation with the evening newspaper. His wife may be quietly seething over his obstinate refusal to accompany her to the monthly PTA meeting. Moreover, their oldest son was sent home with a note from the principal and all he could say was that he could not understand algebra nor why he should be concerned with Julius Caesar's trek through Gaul. He hates his teachers and school and would rather drop out and get a job. On top of all this, he wants to listen to the Top 40 at the same time his father wants peace and quiet and his mother wants to decide finally whether they are going away on their vacation or staying home and painting the house.

Often there is a seemingly zero-sum quality to these familial conflicts. The parents want their young children to go outside and play so they can have some privacy and the children want to stay in and be entertained. These conflicts of interest are infinite in number and are the grist for escalating disengagement, disaffection and domestic guerilla warfare.

## 3.2 Time Together

One of the more elementary features of family life is that the members spend a great deal of time with each other. There are a number of consequences stemming from this fact. For instance, seemingly small annoyances such as one's table manners or how one squeezes a tube of toothpaste may be exaggerated way out of proportion to their true importance. Indeed, the same behaviors observed in a friend would largely go unnoticed. Additionally, the more time spent together, the greater the overlap of common interests and activities. This, in turn, means that there are even more events around which disputes and disagreements might arise.

### 3.3 High Level of Intimacy

The high level of emotional involvement of their members is another distinguishing characteristic of families. Whether it is the emotional bond linking parent and child that is described as mutual attachment or the attraction between husband and wife that is often described as romantic love, the level of positive emotional affect is usually higher in the family than in any other human group. But such mutual investment in one another generates its own risks and pains. A husband or wife may deceive the other and a child can fail to live up to his or her parents' high expectations.

There seems to be a tendency for students of the family to use a see-saw theory of emotional affect. Thus, the higher the degree of positive affect, or the higher the frequency of positive interactions, the lower the degree of negative affect and the lower the frequency of negative interactions. Actually, these behaviors may be independent of each other, and in some cases, they may even co-vary with each other. At least this is one implication of the high incidence of violence in families. Next to the bedroom, the most dangerous place on earth may very well be the dining room.

There are a number of other features of family living that may combine with the high degree of emotional involvement to increase the likelihood of violence (Gelles and Straus, 1977). One is that in most societies the kinship and household structure insulates the family from the social constraints of others which could, otherwise, mediate their conflicts. Most family fights occur behind closed doors. Second, in contrast to other social groups, membership is largely involuntary and when conflicts do arise, the alternative of resolving them by simply leaving does not exist as a reasonable solution. Finally, membership in a family usually implies the right to influence the behavior of others. Thus, dissatisfaction with the conduct of another family member may be exacerbated by active attempts to change that behavior. This is especially the case since there usually are cultural norms legitimizing the use of violence between family members. This is particularly true so far as the physical punishment of children is concerned.

## 4. THE FREQUENCY OF FAMILY VIOLENCE

There is a considerable amount of statistical evidence that documents that the family is the most common location of interpersonal violence.

### 4.1 Homicide

Murder is one feature of family violence for which there are fairly good statistics. Steinmetz and Straus (1974) suggest that one reason for this is because murder is a crime that leaves physical evidence that cannot be ignored. To emphasize the extent of domestic homicide, Gelles and Straus (1977) note that as many people are murdered by their relatives within a normal six month period in New York City as have been killed in all of the battles in Northern Ireland to date. Data gathered from a number of societies indicate that domestic quarrels comprise somewhere between 30 and 60 percent of all homicides (Bohannon, 1960; Curtis, 1974). In 1973 the FBI investigated 17,123 cases or murder. Of this total, 13.7 percent were cases of one spouse killing another, 3.3 percent parent killing child, 8.7 percent involving other relatives, 7.2 percent involving romantic triangles and lovers' quarrels, and 42 percent were described as "other arguments" (Kelly, 1973).

### 4.2 Police Calls

Parnas (1967) has estimated that more police calls involve family fights than do calls for all other criminal incidents combined. He found that 22 percent of all police calls resulted in the investigation of domestic assaults of one kind or another. Pittman and Handy (1964) found that aggravated assaults between husbands and wives accounted for 11 percent of all aggravated assaults in St. Louis. The figure for Detroit was 52 percent (Boudouris, 1971). As Gelles and Straus (1971) argue, these are probably conservative estimates since there are a number of factors which operate against the police being called in the first place.

### 4.3 Physical Punishment

A number of researchers have attempted to estimate the frequency of the use of physical punishment in families. Taking these studies together (Bronfenbrenner, 1958; Erlanger, 1974; Stark and McEvoy, 1970), it appears that 84 to 97 percent of all parents employ physical punishment with their children. This pattern is found for children of all ages, even older children. For example, Steinmetz (1974) and Straus (1971) found that over 50 percent of their respondents, as late as their senior year in high school, had experienced physical punishment or its threat as a form of parental discipline.

### 4.4 Child Abuse

Estimates of the incidence of child abuse in the United States are quite varied, ranging from a low of 6,000 cases per year (Gil, 1970) to 200,000 to 500,000 cases per year (Light, 1974). In 1975 there were approximately 550,000 cases of suspected child abuse and neglect reported in the

United States (Helfer and Kempe, 1976).

In an attempt to obtain more accurate statistics on the frequency of all forms of domestic violence, Straus, Gelles and Steinmetz in 1976 conducted a study employing a national probability sample (Gelles, 1977). Their sample produced data from over 1,000 families. Eligible families consisted of couples who identified themselves as married or being a couple and who had children between the ages of 3 and 17 living at home. For each family, a "referent" child was selected at random and the parents were interviewed concerning their parenting practices during the previous year, i.e. 1975. For the purpose of the study, the researchers assumed that "ordinary" physical punishment and child abuse were but two ends of a single continuum of violence towards children. Sixty-three percent of the respondents mentioned at least one violent act during the survey year. Fifty-eight percent of the parents reported slapping or spanking their child in the previous year while 41 percent admitted pushing or shoving their child. Thirteen percent of the parents reported hitting their child with an object the previous year. "Approximately 3 percent of the parents reported kicking, biting, or hitting the referent child with a fist in 1975" (p. 16). Extrapolating to the number of children in the United States between the ages of 3 and 17, somewhere between one and two million children had been kicked, bitten or punched by their parents during 1975. Moreover, again extrapolating to the population at large, approximately 50,000 children had their parents using a knife or gun on them in 1975 (Gelles, 1976).

### 4.5 Conclusions

Looking at all of the evidence, it is quite clear that when we consider domestic violence, in general, or child abuse, in particular, we are dealing with a phenomenon that has an incredibly long history and that occurs with astonishing frequency - we are, in short, considering a problem of major proportions. Even a casual reading of the papers presented at the First International Congress on Child Abuse and Neglect in Geneva, Switzerland in 1976 indicates that child abuse is a problem which has neither cultural, societal nor social class boundaries (Child Abuse and Neglect: The International Journal, 1977). Thus, let us now consider some of the attempts that have been made to explain the occurrence of abusive behavior.

## 5. EXPLAINING CHILD ABUSE AND NEGLECT

A number of excellent reviews of the research literature (e.g., Belsky, 1977; Parke and Collmer, 1975) suggest that there have been three major approaches to understanding child abuse and child neglect.

### 5.1 The Psychiatric Model

The earliest published research on child abuse and neglect was initiated by physicians (e.g., Kempe et al., 1962); thus it should not be surprising that this early work was strongly influenced by a medical model (Galdston, 1965; Helfer and Kempe, 1972; Steele and Pollock, 1974). Basically, the chief assumption of the psychiatric approach is that the causes of abuse and neglect are to be found in the parents who, in turn, possess certain personality characteristics that distinguish them from non-abusing parents. Not only do these adults possess distinctive personality traits, but these traits are essentially pathological. Child abuse, like other pathologies, was felt to be indicative of an underlying sickness. After all, who but a sick person would deliberately harm a defenseless child?

There have been a number of difficulties associated with the psychiatric approach from its very inception. Perhaps the most significant problem is that the research upon which it was based consisted largely of small, non-random, clinical populations. Moreover, these studies rarely employed non-abusive or non-neglectful families as control groups. Consequently, it is often difficult to determine whether the detected characteristics of the problem parents were unique to them or were characteristics of the population at large.

Undoubtedly, there may be cases of psychopathological assault by parents that reflect psychotic functioning, but these probably involve a very small proportion of abuse cases in general. Indeed, Kempe (1973), a pioneer in the study of child abuse and in the development of the psychiatric model, has recently estimated that less than 10 percent of child abusing adults can accurately be labeled mentally ill.

Were we to consider less severe psychological dysfunctions, some empirical support can be found. For example, in an early follow-up study of 31 children classified as abused, unclassified or not abused, Elmer (1967) found that emotional difficulties such as frequent crying spells, depression and disturbances in eating and sleeping occurred significantly more often among the abusive mothers.

One of the more commonly noted characteristics of abusive parents is their tendency to have distorted perceptions of the nature of childhood. There is said to be a tendency for the abusive parent to expect to be cared for and nurtured by the child (Morris and Gould, 1963). When the child fails to meet parental expectations, the parents presumably strike back in anger at the child (Brown and Daniels, 1968; Johnson and Morse, 1968; Spinetta and Rigler, 1972).

There are a number of other characteristics that are supposed to be commonly found in abusive parents. For example, they are said to have difficulty in dealing with aggressive impulses (Wasserman, 1967), they are rigid and domineering (Johnson and Morse, 1958) and they are impulsive, immature, self-centered and hypersensitive (Kempe et al., 1962). Other characteristics linked to abusive or neglectful parents include alcoholism (Blumberg, 1974; Johnson and Morse, 1968; Young, 1964), low self-esteem and a history of having themselves been abused or neglected as children (Curtis, 1963; Kempe et al., 1962; Steele and Pollock, 1968; Spinetta and Rigler, 1972).

In addition to the tendency to base such claims on small, unrepresentative clinical populations, another problem with the attempt to locate the causes of child abuse and neglect within the psyche of the parents or caretakers is that it has been difficult to replicate the effects of these variables, especially in studies that have planned comparison or control groups (Gelles, 1973; Parke and Collmer, 1975). These problems led researchers to look for alternative, external determinants of abusive patterns.

## 5.2 The Sociological Model

The psychiatric model was challenged by a number of researchers who argued that the focus should not be on individual psychological differences but on those forces within society that lead adults to abuse or neglect their children (Gelles, 1973; Gil, 1970).

There are three major characteristics of this approach. The first is that child abuse and neglect can best be understood in terms of "the society's basic social philosophy and value premises" (Gil, 1974, p. 12), especially those values and attitudes towards violence and physical punishment as a means of interpersonal control. As we have seen earlier in this section, there certainly seems to be considerable agreement that physical punishment is an acceptable disciplinary tactic - especially with children. So far as the United States is concerned, there seems to be ample evidence that violence is often condoned, justified and prescribed by social norms (Gil, 1970; Geis and Monahan, 1976; Lystad, 1975; Stark and McEvoy, 1970).

Nor is this pattern limited to the United States (Levy, 1969; Sidel, 1972; Stevenson, 1968).

The second key element of the sociological approach is the belief that when families are exposed to stress, violence is likely to erupt. Child abuse is just one form that this violence can take. The third characteristic is that the position of the family within the larger social structure plays an important role in determining the likelihood of domestic violence. Central to the sociological model is the assumption that the degree of stress is inversely related to social status. Thus, lower socio-economic groups are felt to experience greater social stress and are, thereby, more likely to display violent aggressive behavior.

The sociological model has been strongly shaped by research based on official statistics collected from various social service agencies. Given the fact that poorer families are more likely to contact these agencies, there may be a tendency for lower socio-economic groups to be over-represented. Nonetheless, there is reason to suspect that child abuse, especially physical abuse, may be correlated with social class. Gil's national survey (1970) indicated that child abuse is more likely in lower class homes. For example, over 48 percent of the abusive families had an annual income under $5,000 while the percentage of all families at this level was only around 25 percent. Moreover, less than 1 percent of the abusive mothers were college graduates and only 17 percent had graduated from high school. Indeed, 24 percent had less than 9 years of formal education. In addition to the Gil survey, there is the commonly observed fact that violence, in general, whether it be aggravated assault, armed robbery or gang fights, tends to be more common in lower socio-economic areas. Moreover, other studies have documented the contention that child abuse, in particular, is more frequent in poorer families (Garbarino, 1976), though again, there are real problems in interpreting results based on official statistics. Whatever the presumed crime, the lower the socio-economic level, the greater the likelihood that law enforcement or other social agencies will be called in.

Researchers operating from a sociological perspective have investigated a number of social structural correlates of child abuse. Some of these are more likely to be found in lower socio-economic groups. For example, unemployment seems to be implicated in child abuse. Gil (1970) in his survey found that nearly 50 percent of the fathers involved in child abuse were unemployed during the year in which the abusive incident occurred. This finding held up in Light's (1973) subsequent reanalysis of Gil's data.

Another factor found to be associated with the incidence of child abuse or neglect is isolation from the larger community (Bennie and Sclar, 1969; Garbarino, 1977; Lenoski, 1974; Young, 1964). A number of things may be operating here. For example, due to their relative social isolation, the abusive parents may simply not be subjected to normal social control pressures that would operate to keep their behavior within socially sanctioned boundaries. Alternatively, or additionally, the abusive parents may simply not have access to others - friends, relatives, neighbors - who could assist them during particularly difficult times.

A number of investigators have found that the structure of the family itself may be related to the incidence of child abuse. For instance, Gil (1970) and Young (1964) have reported data which indicate that the proportion of abusing families with four or more children is twice that found in the general population. Light's (1973) data indicate a similar pattern in England and New Zealand. Basically, these researchers have argued that, the larger the family, the greater the drain on all the family's resources. In addition to sheer family size, having births too closely spaced may place excessive demands on the family.

Another structural characteristic of families that has been associated with abusive patterns of child care is marital discord (Green, 1976; Spinetta and Rigler, 1972; Young, 1964). Essentially, the assumption here is that conflict between the parents themselves can spill over and affect the parents' treatment of their children.

The basic assumption of the sociological model is that there are a number of stress factors that can impinge upon families, induce frustration, and elicit violent, aggressive behavior. The potential stress factors are many and include such things as poor parental health, drug and alcohol abuse, financial difficulties, unemployment, legal problems, over-crowded or inadequate living conditions, marital instability, too many children, births too closely spaced and isolation from effective social support systems. While the frequency of these conditions may be correlated with social class, they would undoubtedly be experienced as aversive regardless of one's position in the social structure. Moreover, though the frequency of domestic violence in general, and child abuse in particular, may be correlated with lower socioeconomic status, the fact remains that not all poor families abuse their children. Nor is it clear that if their financial problems were resolved abusive parents would suddenly be transformed into paragons of parental virtue. Such concerns have led to the gradual evolution of a third explanatory perspective.

### 5.3 The Social Interactional Model

Dissatisfaction with attempts to explain abuse or neglect solely as a function of individual psychological characteristics of the parents or as due to social structural stress factors has led to an approach that has alternatively been designated the "social situational" model (Parke and Collmer, 1975), the "effect of the child on his caregiver" model (Belsky, 1977) or the "social interactional" model (Burgess, 1978). Whatever it is named, this approach, though still in a stage of conceptual development, has a number of characteristics that set it apart from the two earlier models discussed.

First of all, there is an emphasis upon the fact that abusing and neglectful parents often lack certain fundamental social and parenting skills. Indeed, the very absence of effective coping skills may not only exacerbate the effects of any stress parents may be experiencing, but it also may create stress in its own right. Thus, a child may be difficult to handle and cause stress for a mother precisely because she does not know how to handle the child in the first place.

Second, this approach acknowledges that abused and neglected children, themselves, may contribute to the abusive behavior they receive. Efforts to identify the sources of psychological disturbance in the parents may distract the investigator of child abuse from looking at characteristics of the child that may be contributing to the punitive or neglectful behavior of the parent.

Third, this model for the study of abuse and neglect acknowledges, at least implicitly, that to understand the occurence of such behavior within families, we must look at the patterned forms of interaction that occur within the entire family. In short, we must carefully examine the various dyadic relationships that constitute the family. It is this component of the approach that led Burgess and Conger (1978) to refer to it as a social-psychological model since social psychologists have, since the turn of the century, emphasized the importance of social interaction.

Fourth, the model is multidimensional in character. That is, emphasis is placed on the potential importance of both psychological and sociological variables. Moreover, this paradigm is vitally concerned with how these variables interact and jointly affect the parent-child relationship. Given all of these considerations, it now seems that the term "social interaction" best captures the model and that is how it shall be labeled here.

5.3.1 The Development of Abusive and Neglectful Behavior. When we ask questions about why a particular behavior occurs, we usually overlook the fact that such a question can be approached from four major levels of analysis (Tinbergen, 1951). One, we may want to know how an individual grows up to behave in a particular manner. This is a concern for ontogenic development. Two, we may want to know why the individual displays that behavior just now. This interpretation of the question represents a concern for the immediate antecedents of the behavior. Three, we may want to know the functions the behavior performs for the person who displays it. In short, this is a concern for the consequences of the behavior for the actor. Four, we may want to know what the evolutionary history of the behavior is. This particular meaning to the question of why a behavior occurs reflects a concern for the phylogeny of behavior and is best represented in the work of sociobiologists (e.g., Barash, 1977). There is reason to believe that by analytically separating these different types of questions, we can move ahead expeditiously and avoid unnecessary theoretical conflict. In this manner, the present section is concerned with the development of abusive behavior.

As noted earlier, a number of studies have documented that many abusive and neglectful parents were themselves abused or neglected as children (e.g., Curtis, 1963; Kempe et al., 1962; Spinetta and Rigler, 1972). From a behavioral standpoint, there are a number of learning processes that may account for the acquisition of abusive or aggressive behavior. First of all, a child may be directly reinforced for aggressive behavior (Bandura, 1973). This reinforcement can take many forms. A child may win the approval of siblings and peers for behaving in hostile or aggressive ways towards others (Patterson et al., 1967). Parents may even directly reinforce aggressive behavior, as when a father proudly exclaims that his son, who just won a fist fight with the boy next door, is "just a chip off the old block." Parents may also unwittingly use a shaping procedure and differentially reinforce successive approximations to aggressive behavior. This may happen when they reinforce increasingly loud or aversive crying and tantrum behaviors.

In addition to direct positive reinforcement, a child may acquire aggressive behavior via modeling and imitation. Indeed, it has been frequently noted that the most important lesson a child may learn when s/he is punished by a parent is that punitive and aggressive behaviors are accepted as effective interpersonal control tactics (Bandura, 1973). The aggressive behavior of siblings, peers, other adults, movies and television can provide still further occasions for the modeling of coercive behavior.

In a recent paper, Patterson (1977) has suggested that for many settings, such as the home, contingencies of positive reinforcement may actually be of limited value for understanding the performance of aggressive and coercive behavior by children. To the extent that positive reinforcement plays a role in the explanation of aggressive behavior, it may come fairly early in the developmental process. For example, a three or four year old child may be positively reinforced for his attacks on his siblings by their complying with his demands. The ultimate effect of these kinds of transactions, however, is that his victims may initiate their own aggressive behavior (Patterson et al., 1967). What then happens is that a cycle of coercion gets established. Once that occurs, subsequent aggressive or coercive behavior serves the function of coping with the other person's aggressive behaviors. The reinforcer for this behavior becomes the termination of the other person's attack. This arrangement, of course, represents a negative reinforcement contingency. Using conditional probability analyses, Patterson (1977) describes some highly suggestive data in support of negative reinforcement as a key mechanism in the maintenance of aggressive behavior. To the extent such behaviors become a part of one's response repertory, the pattern should persist throughout the life-span insofar as those behaviors function accordingly. Thus, abusive parents may exhibit much of their punitive, aggressive behaviors because those behaviors serve to terminate aversive behavior in their children.

An important feature of aggressive behavior, as with punishment, per se, is that it often works - it produces compliance. Especially if there is a large difference in physical size or power, coercive behavior is quickly followed by compliant behavior. Consequently, there is reason to suppose that the more limited a person's social and parenting skills, the more likely s/he is to display punitive, aggressive behavior. At least that is one way to produce a desired response in another. A number of studies of abusive and neglectful parents have suggested that the adults are lacking in effective care-giving skills (Parke and Collmer, 1975). It would be predicted, then, that abusive parents will exhibit a higher percentage of aggressive and otherwise negative behaviors than nonabusive parents. Unfortunately, most child abuse and neglect research has not collected the detailed kinds of data necessary to test such a prediction. PROJECT INTERACT was designed to provide such data.

5.3.2 Proximal Antecedents of Abusive Behavior. Apart from a concern for the development of abusive behavior, attention must be given to the circumstances surrounding the occurrence of specific abusive incidents. Here we are concerned with situational determinants or antecedents of abusive acts.

From an explicit behavioral standpoint, there is evidence that various kinds of aversive stimulation are capable of eliciting aggressive behavior towards others (Azrin and Holz, 1966). Throughout this report, we have seen that there are innumerable features of family life that are potentially aversive. The conflicts of interest that are so much a part of living together under one roof are, themselves, natural sources of possibly aversive stimulation. The imposition of seemingly unfair rules can be quite painful, indeed, as can threats to one's security and well-being. Whether these conflicts and hurts actually elicit or increase the probability of violent or aggressive behavior will depend to a considerable extent on whether the injured party possesses alternative coping behaviors within his or her behavioral repertory. It may also depend, in part, on the existence of cultural, social, or familial norms concerning the appropriateness or inappropriateness of aggressive behavior in those circumstances.

There is a growing body of evidence that the abused child, as a stimulus object, may actually function to elicit abusive behavior. Milowe and Lourie (1964) were two of the first researchers to suggest that characteristics of the child can influence the probability of an abusive incident. They noted that an abused child is often difficult to manage, unappealing and exhibits irritable crying. Similarly, data from Gil's survey (1970) show that 29 percent of the identified abused children exhibited some deviations in social interaction and general functioning prior to the reported abuse. Finally, Johnson and Morse (1968), reporting on a large clinical sample, found that 70 percent of their cases showed some form of developmental problem. The problems ranged from poor speech to physical deformities. Even the child welfare workers who dealt with these children found them hard to handle. The children were described as being "whiny, fussy, listless, chronically crying, demanding, stubborn, resistive, negativistic, pallid, sickly, emaciated, fearful, panicky, unsmiling . . ." (p. 149). In sum, they noted that "the child most likely to be abused was one who was overly active or one who was most difficult to supervise and care for." (p. 147)

The child may contribute to his own abuse in a number of ways. For example, there may be genetic or congenital characteristics that make abuse more likely - the child may be physically malformed or unattractive. Similarly, the child may be retarded and, thus, display numerous aversive behaviors (Elmer and Gregg, 1967; Martin et al., 1974). It is, of course, also possible that the child may develop behaviors through interaction with peers or parents that, in turn, make him a target for abuse. As Bakan (1971) notes, "the well taken care of child attracts positive responses. The child who is abused and neglected becomes ugly in appearance and behavior and invites further abuse and neglect." (p. 109) Basically, the message here is that the unattractive, unreinforcing child may be a target for abuse. Thus, the child who represents an unwanted pregnancy, or who resembles a disliked or unfaithful spouse, the chronically sick child, the hyperactive child or the otherwise difficult to handle child may incite abusive behavior.

A number of studies have also found the incidence of abuse to be associated with prematurity. Elmer and Gregg (1967) noted that 30 percent of the sample they studied was below average in weight at birth. Similarly, Fontana (1973) reported that 25 percent of his sample of abused children were premature. There are two main reasons why prematurity may increase the likelihood of abuse. First, premature infants are more likely to suffer developmental difficulties (Caputo and Mandell, 1970). Second, the typical hospital procedures surrounding prematurity may impede the development or normal social-bonding or attachment (Leifer et al., 1972; Seashore et al, 1973).

It is important to note, however, that prematurity need not lead to abuse. In a study of Egeland and Brunnquell (1977) that compared two subgroups of high-risk mothers, one of which was abusing their children while the other was providing good care, it was found that both groups had similar frequencies of prematurity. In each case, 10 percent of the births were premature. Significant differences between these two groups of mothers included the fact that the well-functioning mothers were better educated and had a better understanding of their child's special needs. Thus, it is possible that the parents' clumsy or aversive actions or their failure to prompt and support appealing positive behaviors in the child may directly affect the extent to which the child develops aversive qualities.

The major conclusion to be drawn from these studies is that in any social relationship each partner possesses characteristics that can interact with those of the other and, thereby, affect the relationship (Burgess and Huston, 1978).

There is still another class of antecedents to abuse that needs to be considered. As discussed earlier, we can look at child abuse as falling along a continuum of aggressive or punitive behaviors directed towards a child. By doing so, it becomes possible to consider events such as frequent punishment, threats, harsh commands and other aversive behaviors as correlates and potential precipitants of major abusive incidents.

Patterson (1976) has shown that, within distressed or problem families, aggressive or coercive behaviors tend to occur in bursts. Moreover, parental punishment tends to accelerate ongoing coercive behaviors. The pattern he describes is essentially an escalating cycle of aggression. Two explanations have been mentioned to account for this paradoxical feature of punishment within problem families. One is suggested by Parke et al.'s (1970) finding that the behavior of children whose conditioning history was marked by intermittent punishment was not as effectively controlled by schedules of consistent punishment as that of children whose history had included consistent punishment. Therefore, parents who punish inconsistently may be contributing to the acceleration of the behavior they are trying to discourage. The second explanation suggests that punishment will be ineffective in suppressing a behavior if it consists of a large number of threats which are seldom backed up (Patterson, 1976). Thus, in desperation, the parent may strike out and physically injure the child. Again, PROJECT INTERACT was designed to collect data relevant to this prediction. In particular, we hoped to discover whether there is a higher frequency of negative verbal and physical behaviors in abusive and neglecting families that could set the stage in those families for escalating violence.

Clearly, higher rates of negative interaction when combined with the other stress factors commonly found in abusive families such as poor health, unemployment, marital instability, legal problems, etc. could produce levels of aversive stimulation conducive to outbreaks of domestic violence.

5.3.3 The Consequences of Abusive Behavior. An assumption underlying my discussion of the social-interactional model is that most cases of abusive behaviors are operants. That is, these behaviors are proximally maintained by their immediate environmental consequences. The only exceptions to this are likely to be the rare occurences of psychotic attack. But even here, the situation is unclear and we might be better off assuming that the behavior is operant.

My concern in this section is with the functional consequences of abusive behavior, i.e., the consequences for the abuser. Aggressive behavior, in general, often produces at least short run benefits for the aggressor and these consequences may functionally control future occurrences of similar behaviors. Such potentially reinforcing consequences include such diverse events as simply seeing the victim in pain, access to scarce resources, the restoration of equity, the gaining of compliance, the acclaim of others and the termination of on-going aversive behavior (Burgess and Conger, 1978).

As seen in the discussion of the development of abusive and neglectful behavior, there are ample circumstances in families where conflicts of interest can be decided by the successful aggressor - to his benefit. Unfortunately, this is a dimension of child abuse that has not received direct or sustained attention. Nonetheless, any successful attempt to treat child abuse will require careful examination of the reinforcing consequences of the abusive and coercive behavior.

It is axiomatic within a behavioral framework that behaviors are often maintained by their immediately reinforcing consequences even though the long range effects are detrimental to the actor. This may help explain the data cited by Patterson (1976) indicating that the frequency of aversive behaviors can actually be increased by the parents' punitive actions. In the short run, coercive acts are negatively reinforced by the termination of the target person's aversive behavior. The long run consequence, however, is an acceleration of coercive behaviors throughout the family. Obviously, there exists a need to investigate the occurrence of such patterns in abusive and neglectful families.

## 6. PROJECT INTERACT

PROJECT INTERACT was designed to investigate patterns of interaction that distinguish abusive and neglectful families from those with no known history of abuse or neglect. This research effort has been strongly influenced by the interactional model. Moreover, it has been shaped by two major assumptions. First, it was assumed that too much emphasis has been placed on physical abuse, *per se*, at the expense of more subtle forms of psychological abuse. Physical abuse, which is often dramatic and sensational, tends to occur at low frequencies. Low frequency behaviors are difficult to study for a number of reasons, such as our inability to be present when they occur and to predict their occurrence with any accuracy. Basically, it was felt that there is a need to address ourselves to higher frequency behaviors - behaviors that can be specified precisely, that occur on a day-by-day basis and that are correlates of abuse. Family interaction patterns, verbal and physical, meet these requirements. Family members interact daily and the quality of these interactions as they occur week-by-week, year-by-year may be far more significant for a child's and family's development than drastic but seldom-occurring physical assault. The second assumption which has influenced this work was that indirect assessment procedures such as interviews, questionnaires, rating scales and secondary statistics are not capable by themselves of yielding the information necessary for understanding the causes and consequences of child abuse and neglect. Thus, our research program was designed to obtain data of a direct observational nature on the everyday interactions which occur in families. These observations were recorded in the home by trained observers at the time the behavior occurred rather than retrospectively.

### 6.1 Family Interaction in Two-Parent Abusive, Neglectful and Normal Families.

6.1.1 Sample. Three family types were selected for study: (1) those where there were authenticated occurrences of non-accidental physical injury (abuse) to one or more children by a caretaker; (2) those where one or more children experienced a lack of parental attention (neglect) so severe that it reached the attention of legal authorities, e.g., failure to provide adequate nourishment and/or supervision and (3) families with no official records of abuse or neglect but that were similar to the first two types on a number of dimensions such as age of parents and children, number of children, and income and educational levels of parents. These latter families were designated control families. The mean income for all family groups was less than $9,000 per year. Parents averaged between

10 and 11 years of formal schooling. The overall mean was just over 3 children per family, though the figure was slightly higher for the neglect families. The median age for children was 6.5 years.

Families classified as abusive (17) or neglectful (17) were recruited through the Commonwealth of Pennsylvania's Department of Public Welfare. The control or comparison families (19) were contacted by the Pennsylvania Field Research Laboratory. All families participated in the study voluntarily. The families reside in a generally rural environment in central Pennsylvania. In order to attract subjects as well as to assure continued participation in the study, the families were paid $10.00 for each of four visits.

6.1.2 Setting. Families were first contacted by a staff member in the company of the child protective service worker who worked with the family. Controls were first interviewed by an employee of the Pennsylvania Field Research Laboratory. This person varied by county. During the initial visit, permission was given by the parents that they be subjects of inquiry. Information concerning family background was obtained and an observation schedule was agreed upon. Two observers were scheduled to see each family at home for six hours during a given week. Generally, these visits occurred on four consecutive evenings immediately after dinner. However, in a few cases families could not meet this schedule and observations were conducted on Saturday mornings or afternoons. Four hours of the six were spent in actual observation of family interaction; a longer period for larger families, slightly less for smaller families. Each of the four observation sessions was separated into three distinct tasks: construction, skill and discussion. A given task lasted from 15 to 20 minutes depending on family size. The construction task varied by session but included a building block set, tinker toys and Lincoln logs. Only one of these was used for a given observation period. Skill games included tossing rings over a wooden post or throwing bean bags through a hoop. Again, only one game was used each session. Finally, the discussion tasks included discussing such issues as "What would your family like to do for a vacation" and "If you won $1,000 in the lottery, how would you spend it?" The order of tasks was standardized across families.

These tasks were selected to facilitate interaction in situations common to most families. The construction tasks were selected to set the occasion for cooperative interaction and to increase the likelihood of physical contact. The skill tasks were selected to allow the family to make up their own rules and to set the occasion for competitive interaction. Finally, the discussion tasks were designed to facilitate verbal exchange among the family members. There was a five minute break between tasks. Within each task a particular family member was focal subject twice for a minimum of one and one-half minutes. Thus, each family member was a focal subject for at least thirty-six minutes over the four observation sessions. The requirement that each family member be focal for at least three minutes during each task meant that the total time per task had to be increased as a function of family size. The order of focal subjects was determined with a table of random numbers before each session begun.

The additional two hours in the home were used by the two research assistants to administer questionnaires that were used in the study. Before the first night's observations, one observer was randomly selected as the person who would give instructions to the family throughout the week.

6.1.3 Response Definition. The principal dependent variable in this study was the observed pattern of interaction between family members. The observational code used was recorded through the Behavioral Observation Scoring System (BOSS). BOSS consists of a ten-digit keyboard, stop-watch, and an especially modified cassette tape recorder. When a particular behavior occurs, the observer depresses a key and an electrical impulse is transmitted onto a magnetic tape inside the attached recorder. Special computer programs decipher the impulse from the magnetic tape. The behavior code, itself, consists of five column entries:

1) Type of Interact

For any given one and one-half to two minute interval, during which a a particular family member is the "focal" subject, he or she can direct a verbal response to another family member (verbal give = 1) or touch another family member (physical give = 3). On the other hand, the focal subject may be the recipient of another's verbalization (verbal receive = 2) or be the subject of another's physical response (physical receive = 4). These four categories exhaust the behavior possibilities for column 1.

2) Emotional Affect of Interact

Column 2 modifies the general interact entry by coding the emotional affect for that behavior (1 = neutral, 2 = positive, 3 = negative). A behavior is scored as neutral if both the content and expression of the behavior are matter-of-fact in affect. A behavior is scored as positive if it indicates verbal or physical liking, approval or support of the recipient's actions, characteristics or possessions. A verbalization with neutral content accompanied by a pleasant intonation, supportive facial expressions or gestures would also be scored as positive. Similarly, a behavior positive in content but neutral in expression would be scored as positive. To be scored negative, a behavior must include a statement or physical demonstration that indicates dislike, disapproval or lack of support of the recipient's actions, characteristics or possessions. A verbalization with neutral content accompanied by a gruff or angry intonation, disapproving facial expression or gesture would be scored as negative. In the same manner, a behavior negative in content but neutral in expression would be scored as negative.

3) Columns 3 and 4 identify the other person who is interacting with the focal subject.

4) In this way, we can record any and all interactions between the focal subject and the other members of the family.

5) To complete the code, column 5 indicates the occurrence of a command (prescriptive command = 1, proscriptive command = 2, comply = 3, refuse = 4, neither = 5). A more complete description of the code in its revised form can be found in the appendix.

Once a family has been observed, the cassette tapes are played through a special electronic interface which notes the events as they occurred as well as the passage of time between the data entries. The addition of a temporal dimension is possible because a cassette is recorded and played back in "real time" which allows for the computation of behavior rates making comparisons within and across families possible. Fortunately, families were most cooperative and observers reported no interruptions during the observation sessions. One feature of the procedures that may account for this lack of interruption is the structure of each session. That is, the five minute breaks between tasks may have allowed sufficient relief to the family members that the 15 to 20 minutes required on each task were easily complied with.

6.1.4 Observer Reliability. In an attempt to minimize observer bias, the observers were not informed until all observations were completed whether the family they were observing was an abuse, neglect, or control family. In addition, immediately after observing a family, the research assistants involved were asked to guess in which family category this family belonged. Basically, they were poor guessers. In general, families were identified as as neglecting less often than would be expected from their actual number. The majority of the families was hypothesized to be in the control category.

The observers operated in pairs which were shifted in composition every two or three weeks to prevent the development of unique definitions of behavior codes. Change in pairs was accomplished randomly. In order to check on observer reliability, both observers coded family interaction over all sessions. One observer's tapes were randomly selected for complete analysis. Then a "probe" tape was randomly selected from the second observer's coding, one from each session, to compare with the data from the other observer. Observer reliability was estimated by computing correlation coefficients, slopes and intercepts using the rates of a particular behavior scored for each family member by the two observers. That is, for each observer a matrix is produced showing rates of a given behavior from each family member to every other and it is these matrix entries which are correlated. Two sources of error are taken into account, i.e., the actual frequency of a given behavior and the time involved in observation. Since each observer is following the same focal subjects in the same order each evening, the entries in the who-to-whom matrices for a particular behavior type will, ideally, be the same. If the correlation coefficient is high, the intercept close to zero and the slope approximately 1.00, agreement between the observers would be high. If the intercept either exceeds or is less than zero, a high correlation with a slope close to unity would suggest a persistent positive or negative bias in the data.

6.1.5 Observer Agreement. In all, over 20,000 verbalizations were recorded for each family type, with mean frequencies per family ranging from 1,254 to 1,430. Table 1 contains the correlation coefficients, intercepts and slopes which reflect the degree of agreement in coding between the various observers. With the exception of those reported for physical contacts and complies, all correlations are .91 or greater. All intercepts are essentially zero and only the slope reported for complies varies markedly from 1.0.

6.1.6 Results. Rather than frequencies, rates of behavior were considered to be the most appropriate units of analysis since individual family members were not always observed for equivalent time periods, e.g., a few subjects missed parts of observation sessions. Moreover, it was possible for individuals to be focal subjects for longer periods of time in the smaller families. However, when rates are examined, one must remember that small rate differences may reflect large disparities in total amounts of behavior. For example, if one family member speaks at a rate of six times per minute, another five times per minute, the first person will emit 60 more verbal responses per hour than the second.

The data are presented in the following rables as mean response-rates-per-minute for verbal and physical acts. From the review of previous research relating family problems to patterns of behavioral interaction, we would predict that the subjects in the abuse and neglect groups, when compared with controls, will (a) have lower rates of verbal and physical contacts, (b) emit fewer positive behaviors, (c) demonstrate higher rates of negative interaction, (d) issue commands more frequently and (e) be less compliant with one another's requests. Since tests of significance are confounded by sample size (Blalock, 1972), and since the time-consuming nature of observational research limits the number of subjects under study, as in this project, significance levels as high as .10 will be reported. This approach will guard against prematurely rejecting possible behavioral differences between groups.

The mean, combined rates of behavior for mothers and fathers from each group are presented in Table 2. Overall F-tests showed significant differences between parents for total behavior rates and for behaviors directed to children

Table 1

Observer Agreement

| | r | $r^2$ | a | b |
|---|---|---|---|---|
| Total Verbal Contacts | .96 | .92 | .02 | .98 |
| Total Physical Contacts | .86 | .74 | .02 | .91 |
| Positive Verbal and Physical Contacts | .92 | .85 | .01 | .99 |
| Negative Verbal and Physical Contacts | .91 | .83 | .00 | 1.01 |
| All Commands | .92 | .84 | .02 | .95 |
| All Complies | .74 | .55 | .01 | .72 |

No such differences were found for interactions between parents, thus, those data are omitted from the table. Moreover, the same analyses of variance procedures revealed no statistically significant differences between children from the three family types; therefore, their rates of interaction will not be reported here.

For total behavior rates, the qualitative dimensions of parental activities appear to differentiate best between the groups (for the overall F-test, $p \leq .05$ for positive, negative, command and compliant behaviors). Differences in verbal and physical behaviors only approach statistical significance ($p \leq .15$). In order to make abuse-control and neglect-control comparisons, Duncan's Multiple Range Test was employed.[1] These probability values are indicated in the table along with percentage differences between problem and control group means.[2]

Parents in the abuse group interact less frequently on both verbal and physical dimensions than controls. They also show a lower rate of compliance. Although the 66 percentage point difference in mean rate of negatives between abuse and control parents is not statistically significant, even equivalence in negative behaviors would indicate that abuse parents are relatively more aversive than controls given their lower rates of verbal and physical contacts.

Neglect parents stand out for their extreme negativity and low rate of positive interactions. For example, they are only one-half as likely to emit a positive response as controls, over twice as likely to behave in a negative fashion. They show the same low rate of compliance as adults in the abuse group.

For behaviors directed toward children, the greatest differences occur, once again, on the qualitative dimensions of interaction ($p \leq .05$ for positives, negatives, commands and complies). Parents in the abuse group interact

Table 2

Mean Rates of Parental Behavior[†]

| Family Type: | Abuse | % Difference | Control | % Difference | Neglect | $F_{2,103}$ | p |
|---|---|---|---|---|---|---|---|
| Total Rates | | | | | | | |
| Verbals | 4.63*** | -13 | 5.34 | - 11 | 4.77 | 1.91 | .15 |
| Physicals | .67*** | -22 | .86 | - 6 | .81 | 1.92 | .15 |
| Positives | .27 | -25 | .36 | - 50 | .18* | 4.70 | .01 |
| Negatives | .20 | +66 | .12 | +125 | .27* | 4.13 | .02 |
| Commands | .94 | -14 | 1.09 | + 20 | 1.31 | 3.29 | .04 |
| Complies | .05** | -44 | .09 | - 44 | .05* | 6.65 | .002 |
| Behaviors Directed to Children | | | | | | | |
| Verbals | 3.17 | -14 | 3.69 | - 9 | 3.37 | 1.13 | .33 |
| Physicals | .57*** | -23 | .74 | - 1 | .73 | 2.10 | .13 |
| Positives | .21** | -34 | .32 | - 53 | .15* | 5.55 | .005 |
| Negatives | .18 | +64 | .11 | +127 | .25* | 3.81 | .03 |
| Commands | .83 | -10 | .92 | + 27 | 1.17*** | 3.11 | .05 |
| Complies | .04*** | -33 | .06 | - 50 | .03** | 3.62 | .03 |
| n: | 34 | | 38 | | 34 | | |

[†] The figures in this table refer to mean rates per parent

* $p \leq .01$, problem/control group comparisons

** $p \leq .05$

*** $p \leq .10$

physically with their children at a rate 23% lower than that for controls. They are also less positive and less compliant. Once again, their rate of negative behaviors - although not statistically significant, is high relative to their lower rates of interaction overall. Neglect parents demonstrate fewer positive or compliant behaviors with their children as well. In addition, they emit more commands than controls and are over twice as likely as controls to behave in a negative fashion with their young.

In sum, abuse parents are distinguishable from controls because of their lower rates of verbal and physical behavior. Given these depressed levels of activity, they are relatively more aversive than controls. They are also less compliant and less positive with their children. Neglect parents are the most negative and the least positive of the three groups. They also make more requests of their children and yet are least compliant with requests from them than any other parent type.

However, the figures in Table 2 tell only part of the story concerning interaction differences in these families. In their study of abusive parents, Reid and Taplin (1977) found clear differences between abuse and control mothers. On the other hand, fathers in the abuse group did not vary greatly from controls. In order to explore the possibility that similar findings might occur among this sample of families, parental behavior for each group was analyzed separating the means for mothers and fathers. Again, levels of statistical significance for control and problem group comparisons are computed using Duncan's Multiple Range Test.

Table 3 contains the mean rates and percentage differences for the behavioral dimensions on which the problem/control groups vary significantly when data are analyzed separately for mothers and fathers. When examined in this fashion, the results show that it is the mothers in the abuse sample who

Table 3

Mean Rates of Behavior for Mothers and Fathers Separately

| Family Type: | Abuse | % Difference | Control | % Difference | Neglect | $F_{2,50}$ | p |
|---|---|---|---|---|---|---|---|
| **Mothers** | | | | | | | |
| Total Verbals | 4.47** | -24 | 5.89 | - 8 | 5.42 | 3.47 | .04 |
| Total Positives | .27 | -34 | .41 | - 46 | .22** | 2.49 | .09 |
| Total Negatives | .23 | +77 | .13 | +154 | .33** | 2.94 | .06 |
| Total Complies | .07 | -22 | .09 | - 33 | .06*** | 2.31 | .11 |
| Verbals to Children | 2.98** | -27 | 4.08 | - 4 | 3.90 | 2.73 | .07 |
| Positives to Children | .21*** | -40 | .35 | - 49 | .18** | 2.61 | .08 |
| Negatives to Children | .20 | +67 | .12 | +158 | .31** | 3.04 | .06 |
| n: | 17 | | 19 | | 17 | | |
| **Fathers** | | | | | | | |
| Total Positives | .26 | -16 | .31 | - 54 | .14** | 2.46 | .09 |
| Total Complies | .05** | -44 | .09 | - 56 | .04* | 4.65 | .01 |
| Positives to Children | .20 | -29 | .28 | - 57 | .12** | 3.15 | .05 |
| Complies to Children | .04 | -33 | .06 | - 67 | .02** | 3.40 | .04 |
| n: | 17 | | 19 | | 17 | | |

* $p \leq .01$, problem/control group comparisons

** $p \leq .05$

*** $p \leq .10$

are most different from their control counterparts. They show lower rates of verbal behavior, overall, and lower rates of verbal and positive contacts with their children. Youngsters in the abuse group apparently reciprocate in kind since they are less likely to interact verbally ($p \leq .04$, one-tailed t-test) or physically ($p \leq .02$, one-tailed t-test) with their mothers than controls. The comparatively low rate of physical interactions shown by abuse parents in Table 2 evidently results from their combined contributions to that mean rather than from significant individual differences. Abuse fathers differ from control fathers only in their overall rate of compliant behaviors. Moreover, there are no significant differences between abuse and control children in their responsiveness to their fathers, possibly because of the higher rate of verbalizations ($\bar{x} = 3.36$) by abuse fathers to their children compared to abuse mothers ($\bar{x} = 2.98$).

Neglect mothers stand out for their extremely negative behavior and their low rates of positive interaction. However, there are no statistically significant differences between neglect and control children in their responding to their mothers. This finding may result from the fact that neglect mothers are quite similar in their rate of verbal ($\bar{x} = 3.90$) and physical ($\bar{x} = .88$) interactions with their children to control mothers ($\bar{x}$ verbals = 4.08, $\bar{x}$ physical contacts = .82). Neglect fathers are characterized by low rates of positive and compliant responding. While the verbal interaction differences between neglect and control fathers are not statistically significant, children in the neglect families speak to their fathers less often than controls ($p \leq .04$, one-tailed t-test), interact less positively with them ($p \leq .05$) and initiate fewer physical contacts ($p \leq .02$). These findings, when compared with those for abuse mothers and their children, suggest that the seemingly lower rate of verbal interaction directed by neglect fathers to their children ($\bar{x} = 2.84$) may represent a real difference from controls ($\bar{x} = 3.29$).

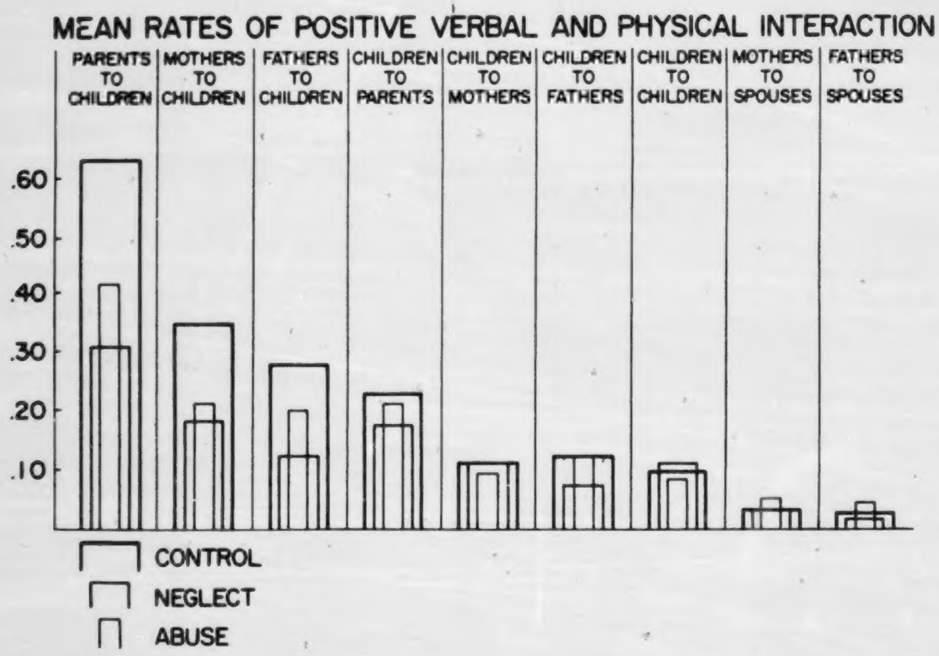
MEAN RATES OF POSITIVE VERBAL AND PHYSICAL INTERACTION
PARENTS TO CHILDREN
MOTHERS TO CHILDREN
FATHERS TO CHILDREN
CHILDREN TO PARENTS
CHILDREN TO MOTHERS
CHILDREN TO FATHERS
CHILDREN TO CHILDREN
MOTHERS TO SPOUSES
FATHERS TO SPOUSES
.60
.50
.40
.30
.20
.10
CONTROL
NEGLECT
ABUSE

Figure 1

Figure 1 helps to illustrate many of the differences between parents found in Tables 2 and 3. The figure shows the general trend toward higher rates of positive interactions in control compared to problem families. As is apparent from the graphs, the differences in positive responding are accounted for primarily by parents. Similarly, Figure 2 highlights differences between the groups for rates of aversive behavior.

6.1.7 Discussion. The data described in this report must, of course, be interpreted with care. To begin with, the sample is small, only 17 abuse, 17 neglect and 19 control families. Yet, in spite of the small sample size, there was, as we have seen, a considerable number of statistically significant findings. Moreover, the patterns of differences between parents were largely those predicted. This suggests that these results are statistically robust. The extent to which these interaction patterns are peculiar to our largely rural sample can only be determined by future research of a similar nature in urban settings.

For the abuse families, mothers were behaviorally most dissimilar to controls. They were less verbal, overall, than controls and spoke to their children less often with an apparently concommitant decrease in their positive contacts with them. This finding is consistent with the results reported by Reid and Taplin (1977); however, the interaction differentials were not the same. For example, while the abuse mothers in that study were significantly more aversive than controls, the same mothers in our study were not. However, the mean rate of negative behaviors by the abuse mothers was 77 percent greater than that for control mothers, while the mean negatives for both parents combined was 66 percent higher. Although this finding was not statistically reliable, it appears that a much larger proportion of verbal and physical contacts by abuse parents was aversive when compared with controls. This higher relative rate of negativity may have the same impact in terms of

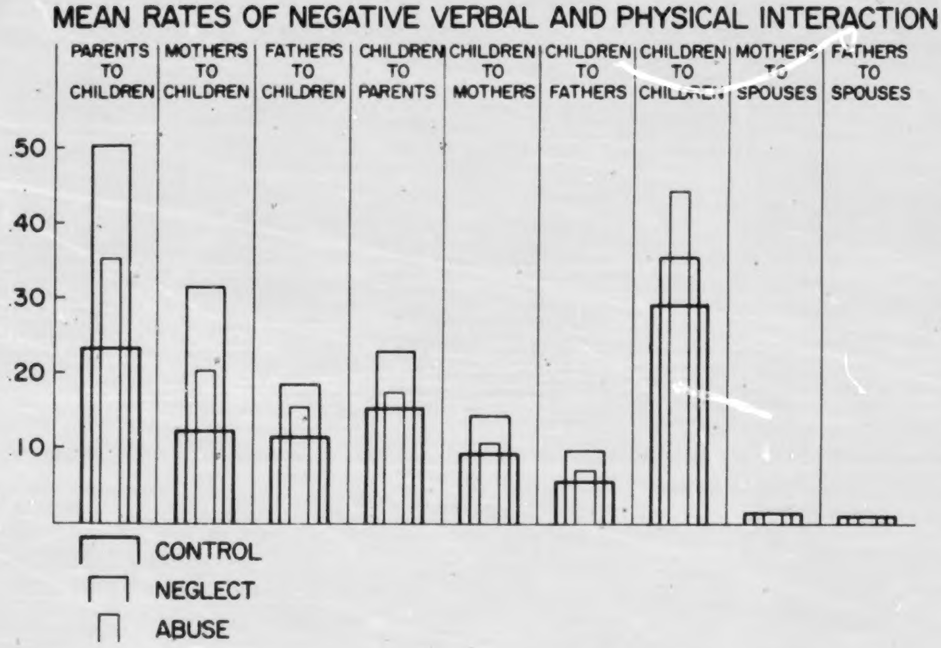
MEAN RATES OF NEGATIVE VERBAL AND PHYSICAL INTERACTION
PARENTS TO CHILDREN
MOTHERS TO CHILDREN
FATHERS TO CHILDREN
CHILDREN TO PARENTS
CHILDREN TO MOTHERS
CHILDREN TO FATHERS
CHILDREN TO CHILDREN
MOTHERS TO SPOUSES
FATHERS TO SPOUSES
.50
.40
.30
.20
.10
CONTROL
NEGLECT
ABUSE

Figure 2

producing family dysfunction as absolute rate differentials.

With the exception of their low rates of compliance, fathers in the abuse sample did not differ markedly from controls. Once again, this result is consistent with the findings from Reid and Taplin's study. At least on the dimensions of behavior explored in this study, the mothers in the abuse groups would appear to be most in need of immediate assistance. Of course, further analyses may produce more striking father differences. We do not know, for example, whether or not the rates of negative behavior emitted by fathers represent more intense punishment than the aversive responding by mothers. Moreover, we cannot tell from these data the contingent relationships between fathers' activities and the behavior of other family members.

Contrary to (a) our expectations, (b) the theoretical speculations of others and (c) research evidence (e.g., Friedrich and Boriskin, 1976; Parke and Collmer, 1975; Reid and Taplin, 1977), we found little to suggest that children in abuse families behave in a fashion remarkably different from controls. Their lower rates of verbal and physical interaction with their mothers may result as much from maternal neglect as from their own behavioral atypicalities. Or, these findings may represent a reciprocal influence which could lead to increasing withdrawal between the children and their mothers. The rates of negative behaviors by youngsters in abuse families which are graphed in Figure 2 do suggest more aversive conduct by these children than controls. However, none of these rate differentials are statistically significant. Analyses now underway may show greater behavioral differences when data are inspected separately for only those children who have been direct victims of abuse.

Of all the mothers in the study, those in the neglect group stand out as the most negative and the least positive in their relationships with producing family dysfunction as absolute rate differentials.

With the exception of their low rates of compliance, fathers in the abuse sample did not differ markedly from controls. Once again, this result is consistent with the findings from Reid and Taplin's study. At least on the dimensions of behavior explored in this study, the mothers in the abuse groups would appear to be most in need of immediate assistance. Of course, further analyses may produce more striking father differences. We do not know, for example, whether or not the rates of negative behavior emitted by fathers represent more intense punishment than the aversive responding by mothers. Moreover, we cannot tell from these data the contingent relationships between fathers' activities and the behavior of other family members.

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Of all the mothers in the study, those in the neglect group stand out as the most negative and the least positive in their relationships with other family members. Indeed, it is this group of parents who seem most like the abuse mothers in the Reid and Taplin (1977) study. As noted in the introduction, the lack of conceptual clarity between abuse and neglect (e.g., whether parents who intentionally harm their children through sins of omission can be meaningfully differentiated from those who intentionally abuse them) may partially account for this finding. We cannot be certain that mothers within the neglect sample do not severely punish their children, although possibly without the same fervor as those in the abuse group. From these findings, however, it would be hard to conclude that children in the neglect sample are any less likely to suffer from continued aversive contacts with their parents than those in the abuse group. Given the much higher incidence of child neglect than child abuse (American Humane Association, 1978), these data suggest that the current concern with battered children should not be allowed to blind us to the issue of neglect.

The fathers in the neglect sample are less compliant and less positive with their children than controls. In addition, there is some evidence that they may be less likely to interact with their children in general, as suggested by their lower rates of verbal responding. Although this latter finding is not statistically significant, neglected children do interact less often with their fathers than controls. This result suggests a reciprocal influence, similar to that implied by the data for abuse mothers and their children, which, over time, could lead to severely reduced rates of contact between neglect fathers and their offspring.

The differential patterns of behavior detected for husbands and wives in the problem groups suggest that parents in these families somehow operate in a dissimilar fashion. For example, while the wives in the abuse sample interact with their children less frequently than their husbands, the situation in the neglect families seems reversed. In this group, the husbands tend to be more withdrawn than their wives. Thus, in the abuse group fathers apparently take the major responsibility for dealing with children while mothers take that role in the neglect sample. If these findings are replicated in future research, treatment programs may need to deal not only with the child-rearing techniques being used in these families but also with the development of methods for increasing the contribution of the withdrawn parents to family functioning as a whole.

It should be noted that even though parents in the problem groups differ from controls in their interactions with their children, there is little evidence from the behavioral dimensions explored in this study that they treat one another differently. Rates of interaction between spouses did not differ by family type for any of the response categories reported here. The data lend little support to theories which emphasize unsupportive relationships between husbands and wives as a primary cause of child abuse (e.g., Kempe and Helfer, 1972).

Even though the molar level analyses described in this report provide important information in their own right, they represent only a first step in the attempt to specify the behavioral correlates of child abuse and neglect. In order to understand the processes that are maintaining these patterns of interaction, we need to inspect and analyze the contingencies which exist between the patterns themselves. For example, what kinds of behavior by the child typically precede negative gives by the parent to the child? Similarly, what kinds of behavior by the child are most likely to evoke positive responses from the parent? To begin to answer these and related questions, we need to carry out molecular analyses focusing on response-sequences and conditional probabilities. These analyses are currently underway.

Ultimately, we shall need to conduct experimental analyses to determine the extent to which certain behavior patterns are functionally related to specific others. Such functional analyses are necessary so that we can not only determine conclusively what is presently maintaining such dysfunctional patterns of interaction but also gain further insight into how these patterns develop initially. Moreover, such analyses are indispensable if we are to design and implement truly effective intervention programs aimed at prevention as well as remediation.

[1] Since, theoretically, the comparisons of interest are only those between the problem and control groups, a more conservative test, e.g., Scheffe's, is inappropriate since it protects against errors for any and all possible comparisons. Duncan's test is applicable since it assures a minimum level of protection against falsely rejecting the null hypothesis depending on the number of conditions involved. In a three group comparison, our minimum probability of making no erroneous statements about significant differences in .98 when $\alpha \leq .01$, .90 when $\alpha \leq .05$ and .81 when $\alpha \leq .10$ (Edwards, 1972). Moreover, Duncan's test can be used even if the overall F-test between groups is not significant. As Edwards (1972) has pointed out, the issues involved when making multiple comparisons are far from resolved. One may err too much in protecting against Type I errors at the expense of rejecting real differences between means which become increasingly probable with each new treatment condition.

[2] Although significance tests are computed for individual types of behavior, e.g., positive interactions, our predictions imply that the parents in the problem families will show patterns of differences from controls. That is, they are expected to be less actively involved with other family members than controls but more negative in their behaviors as well. One way to test whether or not the patterns of behavior are as predicted is to use

the sign test (Blalock, 1972), counting as a success any difference in behavior rates consistent with our expectations, any other result a failure. When positive and compliant behaviors are omitted from consideration, since they may occur less frequently among parents in the problem families only because of their lower rates of behavior overall, eight possible comparisons are of interest. Mean rates of verbal and physical behavior should be lower in both problem groups than in the control sample (negative percentage differences in Table 2) and rates of negative and command behaviors should be higher (positive percentage differences). An inspection of Table 2 shows that 7 of these 8 possible outcomes are upheld for total parental behaviors ($p \leq .032$, sign test).

### 6.2 A Comparison of Family Interaction in Single Versus Two Parent Abusive, Neglectful and Control Families.

6.2.1 Introduction. Three recent reviews (Herzog & Sudia, 1973; Marino & McCowan, 1976; Hetherington, Cox, & Cox, Note 3) have pointed out the complexity of the relationship between father absence and child development. Although generalizations abound with respect to the adverse consequences of father absence for such problems as juvenile delinquency, intellectual defects, and psychological maladjustment, these reviewers suggest that the relationships are much more equivocal than if often assumed. Inconsistent findings from studies of the correlation between father absence and aberrant behavior point to the fact that many researchers have not adequately controlled for such factors as income level, race, and type of parent absence. A much clearer relationship appears to exist between such factors as the quality of parenting and general family climate and harmony than the presence or absence of the father (Herzog & Sudia, 1973). Consequently, it is essential to examine family processes and functioning rather than to assume that father absence or presence will necessarily have a particular effect.

To this end, Hetherington, Cox, and Cox (1976) have recently conducted a two year longitudinal investigation of families having lately experienced divorce as well as families that had not. These authors used laboratory observational measures as well as self-report and questionnaire methods to measure family functioning and climate. The observational measures indicated great differences between the intact and divorced families, particularly during the first year following the divorce. Divorced mothers exhibited fewer positive and more negative behaviors to their children, while their children were less compliant. By the end of the second year, significant improvements, as defined by a greater number of positive parent behaviors and more child compliance, had occurred within the families having divorced parents. The observational measures provide an excellent way to measure family climate and the quality of parenting.

In this section, I will describe some data which allow us to compare the functioning of single and two parent families and to determine whether any differences between single and two parent families in terms of their styles of interaction are peculiar to abusive, neglectful or control families. We will also have an opportunity to determine whether the differences between abusive, neglectful and control families found with two parent families are replicated with single parent families.

6.2.2 Sample. Single parent families (8 abusive, 9 neglectful and 10 control) were included in these analyses if there was no male figure living in the home on a routine basis. Unfortunately, because of sampling restrictions, it was not possible to control for the type of parent absence. Reasons for father absence were: divorced or separated (20); husband dead (5); never married (1); and husband in jail (1). Within the abusive families, the absent father was the identified abuser in 4 cases.

The two parent families (17 abuse, 17 neglect, and 19 control) are the same families described earlier.

6.2.3 Comparisons Between Intact and Single Parent Families. Comparisons will be presented between the two parent (to be called "intact") and one parent families within each of the abusive, neglectful, and control types. In addition, all intact families combined will be compared to all one parent families combined.[1] The single parent mothers' data will be compared to both the intact mothers' data and to the intact parents' (mothers' and fathers' combined) data. The first comparison will be made to determine if the single and two parent mothers interact with their children in similar ways. It might be expected, for example, that a single parent mother would interact more with her children since there is no husband present. The latter comparison, the single parent mother versus the intact parents, will be made to examine whether the single parent mothers adjust (i.e., increase) their rate of interaction to offset the absence of the father. T tests (two-tailed) with separate variance estimates are used in all comparisons.

Verbal contacts. As presented in Table 4 and Figure 3, several significant differences exist between the intact and single parent families' verbal contacts. There is a tendency for intact neglectful and control families to exhibit approximately 120 more verbal contacts per hour than the single parent families. Given the similar rates of contact displayed by the neglectful and control single and intact mothers, this higher rate found among the intact families is clearly due to the fathers' contributions. It should be noted that a different pattern is found in the abusive families; the single parent abusive mothers demonstrate a higher rate of interaction than the intact mothers.

Some interesting results appear when the recipients of the mothers' contacts are examined. It should be expected that the single parent mothers,

## Table 4

### Mean Rate[+] of Total Verbal Contacts

| Family Type | 2-Parent Abuse | | 1-Parent Abuse | 2-Parent Neglect | | 1-Parent Neglect | 2-Parent Control | | 1-Parent Control | All 2-Parent | | All 1-Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | p | | | p | | | p | | | p | |
| Total Family | 19.48 | | 19.35 | 19.61 | .098 | 16.77 | 20.77 | .002 | 15.97 | 19.98 | .010 | 17.24 |
| Mother | 4.47 | .049 | 6.45 | 5.42 | | 5.57 | 5.89 | | 5.99 | 5.29 | | 5.99 |
| Children | 10.22 | | 12.90 | 10.06 | | 11.20 | 10.03 | | 9.98 | 10.10 | | 11.25 |
| Parents* | 9.26 | .013 | 6.45 | 9.54 | .001 | 5.57 | 10.73 | .000 | 5.99 | 9.88 | .000 | 5.99 |
| Mother to Children | 2.98 | .005 | 6.12 | 3.90 | | 5.37 | 4.08 | .026 | 5.56 | 3.67 | .000 | 5.66 |
| Parents to Children | 6.34 | | 6.12 | 6.73 | | 5.37 | 7.38 | .014 | 5.56 | 6.84 | .018 | 5.66 |
| Children to Mothers | 2.11 | .000 | 5.21 | 2.72 | .003 | 5.32 | 2.80 | .000 | 4.82 | 2.56 | .000 | 5.10 |
| Children to Parents | 4.41 | | 5.21 | 4.37 | | 5.32 | 5.02 | | 4.82 | 4.62 | | 5.10 |
| Children to Children | 2.88 | | 5.61 | 2.83 | | 4.58 | 2.39 | | 3.44 | 2.69 | .075 | 4.47 |

[+] Rates refer to responses per minute.
Probabilities refer to differences between two and one-parent families.

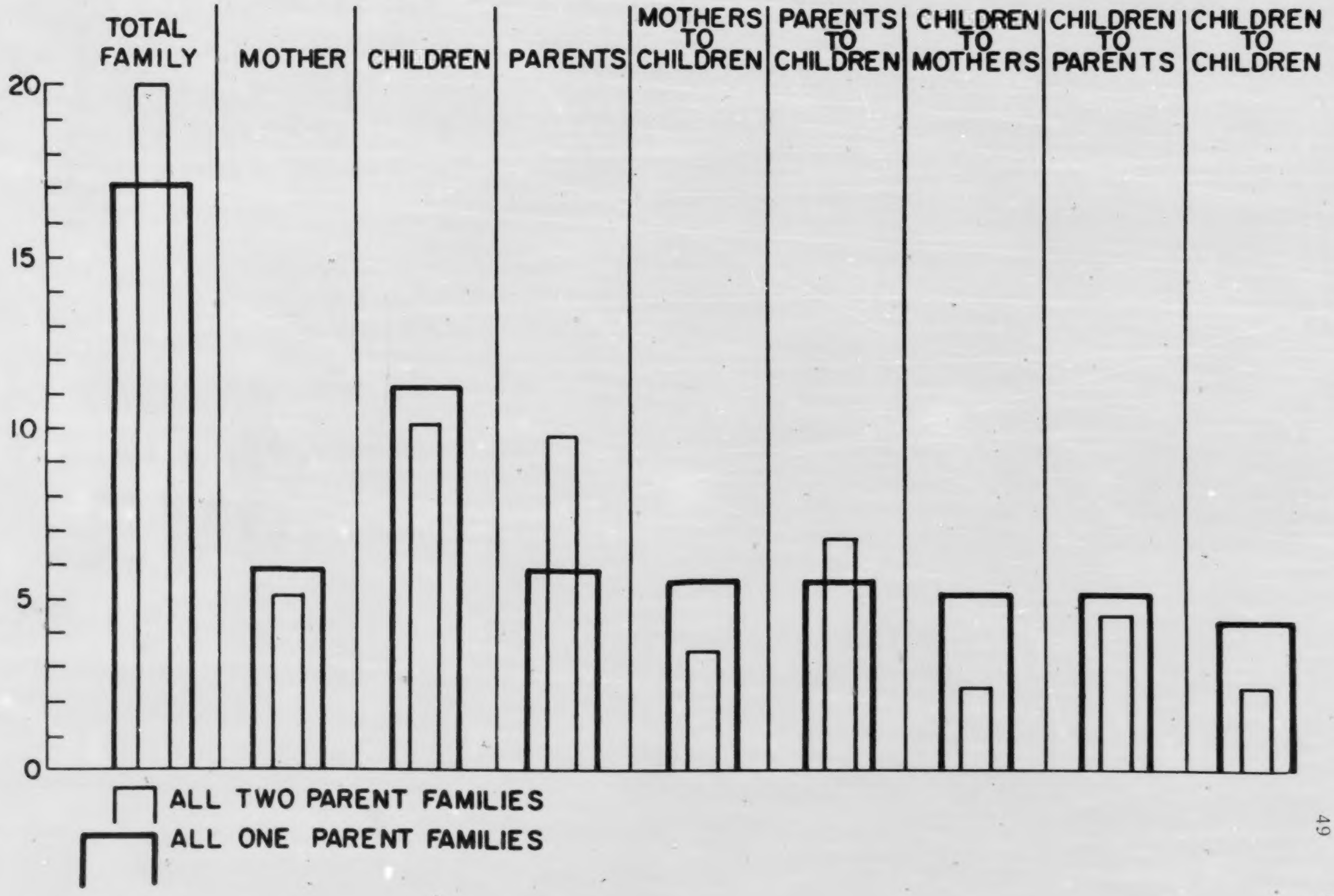
[*] Data in this row compare rates of both parents combined in the two-parent families with the rates of the single-parent mothers alone.

not having a husband to direct their behavior to, might interact more often with their children than do the intact mothers. Indeed, across all family types, this tendency is demonstrated, particularly by the abusive mothers. Combining all family types, the single parent mothers direct approximately 35% more verbal behavior to their children than do the intact mothers. In fact, the single parent abusive mothers direct over twice as many verbal contacts to their children than the intact abusive mothers. However, combining all family types, the children receive approximately 70 fewer parental contacts per hour as a result of being in a single parent family. This tendency is largely accounted for by the single parent control families. With the exception of these control families, the mothers in the single parent families almost succeed in compensating for the fathers' absence.

When the children's behavior is examined, we find that, overall, single parent children display almost twice the rate of verbalization to their mothers than children in the intact families. Thus, it does appear that the single parent children are more active, especially to their mothers, than the intact children. Indeed, it appears as if the single parent mothers receive contacts from their children equivalent to both parents combined in the intact families.

Physical contacts. Table 2 lists the comparisons for physical interactions. For the total physical contacts within the families, there is great similarity between the intact and single parent families. An important difference that does arise is that the intact parents together display approximately 25 more physical contacts per hour than do the single parent mothers. This difference is particularly noticeable among the control parents. As for the verbal interaction data, the single parent mothers display a substantially higher rate of physical contacts than the intact mothers. When the recipients of the physical contacts are examined, patterns similar to the verbalization

# MEAN RATE OF TOTAL VERBAL CONTACTS



data again emerge. The single parent mothers combined, especially the abusive mothers, have a significantly higher rate of physical contacts with their children than do the mothers in the intact families. In fact, the single parent mothers' rates clearly resemble the parents' rate in the intact families. Thus, the single parent children receive only slightly and nonsignificantly fewer physical contacts than the intact children.

The overall rate of childrens' physical contacts is slightly, but nonsignificantly, higher in the single parent families. Significant differences appear when the recipients of the physical behavior are examined. Combining all family types, the single parent children display 27% more physical behavior to their mothers than do the intact children. Most of this difference, however, is accounted for by the children in the abuse single parent families. The single parent children direct fewer physical contacts to their mothers than do the intact children to their two parents combined, and the single parent children direct more physical behavior to each other than do the intact children. These differences are particularly manifested within the control families. In short, while the single parent children do not receive significantly fewer physical contacts than the two parent children, they do receive a greater proportion of their physical contacts from each other than the children in the intact families.

Verbal and physical positives. As presented in Table 6, some extremely interesting results appear with regard to the frequency of positive interactions. Although for the total families as a whole there are no significant differences, the abusive and neglectful single parent mothers do display higher rates of positive behaviors than their intact counterparts. However, the intact control parents together exhibit higher rates of positive contacts than the single parent control mothers alone. Indeed, the parents in the

## Table 5

## Mean Rate[+] of Physical Contacts

| Family Type | 2-Parent Abuse | | 1-Parent Abuse | 2-Parent Neglect | | 1-Parent Neglect | 2-Parent Control | | 1-Parent Control | All 2-Parent | | All 1-Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | p | | | p | | | p | | | p | |
| Total Family | 4.19 | | 4.60 | 4.52 | | 4.45 | 4.58 | | 4.29 | 4.43 | | 4.43 |
| Mother | .70 | .015 | 1.09 | .96 | | 1.28 | .95 | | 1.07 | .87 | .05 | 1.15 |
| Children | 2.84 | | 3.51 | 2.90 | | 3.16 | 2.86 | | 3.22 | 2.87 | | 3.29 |
| Parents* | 1.34 | | 1.09 | 1.62 | | 1.28 | 1.72 | .021 | 1.07 | 1.57 | .008 | 1.15 |
| Mother to Children | .58 | .003 | 1.09 | .88 | | 1.28 | .82 | | 1.06 | .76 | .008 | 1.14 |
| Parents to Children | 1.13 | | 1.09 | 1.45 | | 1.28 | 1.49 | .109 | 1.06 | 1.36 | | 1.14 |
| Children to Mothers | .73 | .01 | 1.18 | .92 | | 1.14 | .98 | | 1.26 | .88 | .006 | 1.20 |
| Children to Parents | 1.49 | .10 | 1.18 | 1.54 | | 1.14 | 1.85 | .01 | 1.26 | 1.64 | .001 | 1.20 |
| Children to Children | 1.35 | | 2.33 | 1.34 | | 2.02 | 1.00 | | 1.96 | 1.22 | .035 | 2.09 |

[+] Rates refer to responses per minute.
Probabilities refer to differences between two- and one-parent families.

*Data in this row compare rates of both parents combined in the two-parent families with the rates of the single-parent mothers alone.

intact control families display more than twice as many positives as the mothers in the single parent families. The abusive and neglectful single parent mothers exhibit rates of positive behaviors nearly identical to those of the intact abusive and neglectful parents combined. Another intriguing finding is that the single parent abusive and neglectful mothers have an almost 40% higher rate of positive behavior than the intact mothers, but this tendency is not shown at all by the control mothers.

The above findings are again apparent when the recipients of the interaction are examined. While intact and single parent control mothers direct similar rates of positive contacts to their children, the single parent abusive mothers direct more positive behaviors to their children than do the intact abusive mothers. In brief, the single parent abusive and neglectful children receive as many positive contacts from their mothers as do the children in the intact abusive and neglectful families from both of their parents. On the other hand, the single parent control children receive only one-half as many positive contacts as the children from the intact control families.

Another interesting finding is that the children in the intact families display significantly fewer positive behaviors (almost 20 fewer per hour) than the single parent children. This tendency is manifested equally across all family types, although it is statistically nonsignificant for each type separately. The interesting differences shown by the single parent control families are also apparent when the recipients of the children's positive contacts are examined. While the single parent children direct more positive acts to their mothers than do the intact children to their mothers and both parents combined, this tendency is especially present in the control children. Finally, the single parent children combined direct three times as many

## Table 6

### Mean Rate[+] of Positive Contacts

| Family Type | 2-Parent Abuse | p | 1-Parent Abuse | 2-Parent Neglect | p | 1-Parent Neglect | 2-Parent Control | p | 1-Parent Control | All 2-Parent | p | All 1-Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Family | .93 | | 1.30 | .74 | | .97 | 1.15 | | 1.11 | .95 | | 1.12 |
| Mother | .27 | .047 | .53 | .22 | | .35 | .41 | | .33 | .31 | | .40 |
| Children | .40 | | .78 | .37 | .081 | .63 | .43 | .074 | .78 | .40 | .006 | .73 |
| Parents* | .53 | | .53 | .37 | | .35 | .73 | .007 | .33 | .55 | .055 | .40 |
| Mother to Children | .21 | .015 | .52 | .18 | | .34 | .35 | | .32 | .25 | .018 | .38 |
| Parents to Children | .41 | | .52 | .31 | | .34 | .63 | .008 | .32 | .46 | | .38 |
| Children to Mother | .09 | .043 | .29 | .11 | .015 | .29 | .11 | .001 | .39 | .11 | .000 | .33 |
| Children to Parents | .21 | | .29 | .18 | | .29 | .23 | .049 | .39 | .21 | .01 | .33 |
| Children to Children | .08 | | .40 | .11 | | .23 | .09 | .05 | .25 | .09 | .012 | .29 |

[+] Rates refer to responses per minute.
Probabilities refer to comparisons between two- and one-parent families.

[*] Data in this row compare rates of both parents combined in the two-parent families with the rates of the single-parent mothers alone.

positive behaviors to each other than do the children from the intact families.

Verbal and physical negatives. Great differences appear in the rates of negative interactions, as presented in Table 7 and Figure 4. Combining all family types, the one parent families exhibit a rate over 40% higher than the intact families. This significant difference amounts to approximately 45 more negative contacts per hour in the single parent families. These differences appear in all family types, although the differences are not statistically significant within the family types taken separately. The higher rate of negative contacts in the single parent families appears to be accounted for as much by the mothers as by their children. The single parent mothers combined display over twice as many negative behaviors (almost 25 more per hour) than the intact mothers. This difference is especially noticeable within the abusive and control families. Less pronounced differences appear when the single parent mothers are compared to the combined intact parents although the trend is the same. A similar picture emerges when the recipient of the negatives is examined. It is clear that there is a higher rate of negative contacts produced by the single parent mothers, but there is no striking tendency for the higher rate to be shown by any one family type.

The single parent children display a similar higher rate of negative interactions. Combining all family types, they produce almost twice as many (approximately 30 more per hour) negative responses than the intact children. This difference is especially present in the abusive and neglectful families. Single parent children of all family types direct more negative behaviors to their mothers than intact children do to their mothers or their parents combined. Again this difference is somewhat less dramatic in the control children.

## Table 7

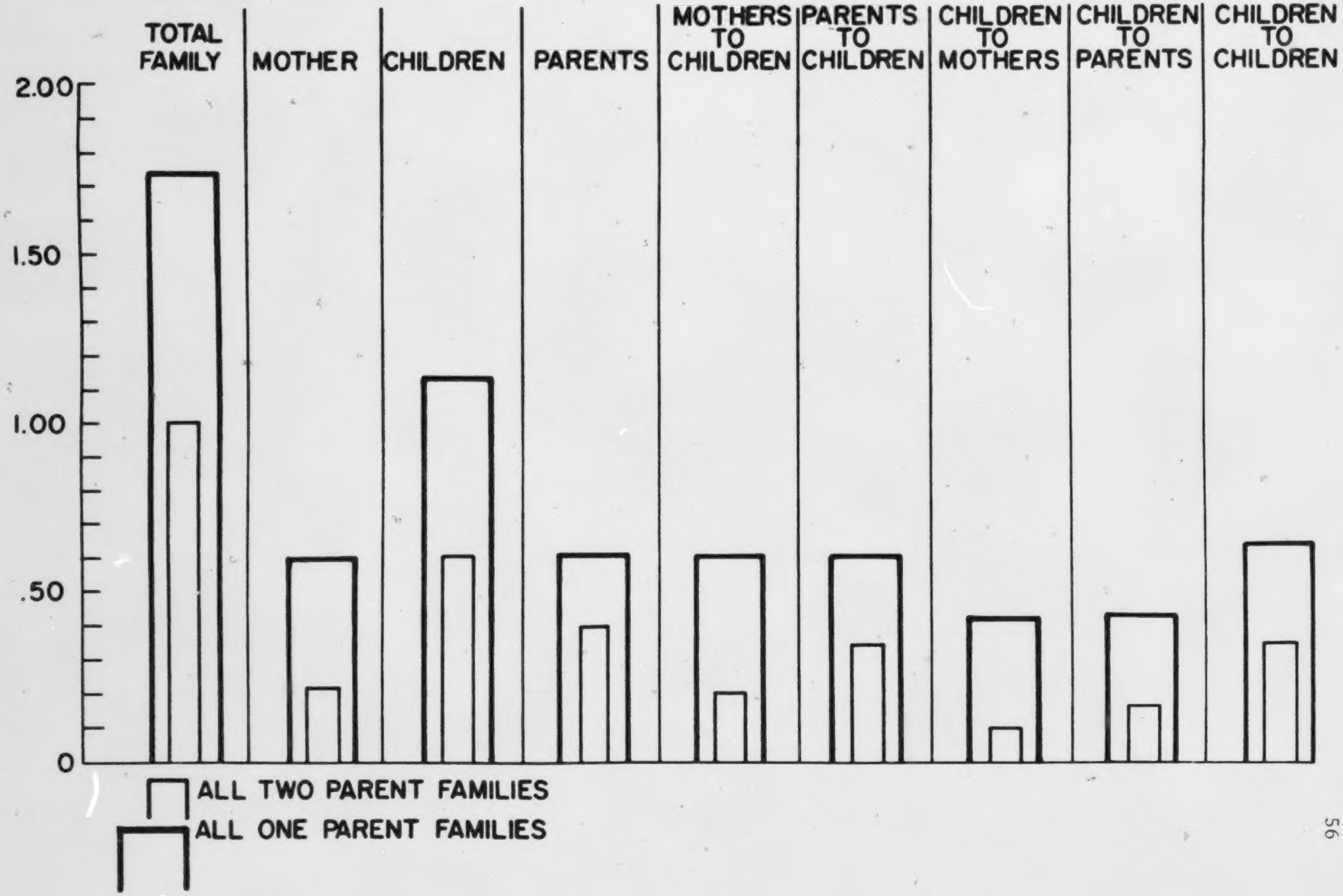
## Mean Rate[+] of Negative Contacts

| Family Type | 2-Parent Abuse | p | 1-Parent Abuse | 2-Parent Neglect | p | 1-Parent Neglect | 2-Parent Control | p | 1-Parent Control | All 2-Parent | p | All 1-Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Family | 1.11 | | 2.12 | 1.20 | | 1.88 | .74 | | 1.32 | 1.01 | .009 | 1.74 |
| Mother | .23 | .032 | .51 | .33 | | .65 | .13 | .031 | .65 | .23 | .001 | .61 |
| Children | .71 | | 1.61 | .66 | .044 | 1.24 | .49 | | .66 | .61 | .016 | 1.13 |
| Parents[*] | .40 | | .51 | .54 | | .65 | .25 | .084 | .65 | .39 | .066 | .61 |
| Mother to Children | .20 | .025 | .50 | .31 | | .63 | .12 | .032 | .63 | .21 | .001 | .59 |
| Parents to Children | .35 | | .50 | .50 | | .63 | .23 | .082 | .63 | .35 | .042 | .59 |
| Children to Mothers | .10 | .004 | .45 | .14 | .007 | .59 | .09 | .05 | .28 | .11 | .000 | .43 |
| Children to Parents | .17 | .019 | .45 | .23 | .031 | .59 | .15 | | .28 | .18 | .001 | .43 |
| Children to Children | .44 | | 1.08 | .35 | | .59 | .29 | | .35 | .36 | .081 | .65 |

[+] Rates refer to responses per minute.
Probabilities refer to comparisons between two- and one-parent families.

[*] Data in this row compare rates of both parents combined in the two-parent families with the rates of the single-parent mothers alone.

# MEAN RATE OF NEGATIVE CONTACTS



6.2.4 Comparisons Between One Parent Abusive, Neglectful, and Control Families. In contrast to the two parent data, no statistically significant differences were found between the single parent abusive, neglectful, and control families. Some trends are evident in the data and are briefly discussed below.

With respect to total verbal contacts, the abusive families, particularly the children to each other, exhibit a slightly higher rate of contacts. Both the abusive and neglectful mothers produce rates very much like the control mothers. As presented in Table 5, great similarities were found for all family types in the rates of physical contacts.

With regard to emotional affect, some differences were found between the family types that approached statistical significance. Surprisingly, unlike the two parent data, the mothers in the abusive families exhibit a slightly higher rate of positive contacts than did the control mothers (p = .10). The neglectful and control families display very similar rates of positive contacts, as do the abusive, neglectful, and control children. While the abusive and neglectful families demonstrate a higher rate of negative contacts, no significant differences were found. These nonsignificant trends were present for the abusive and neglectful children, but were not displayed by the abusive and neglectful mothers. Within the abusive families, the children's higher rates of negatives were especially directed towards the other children within the family, while within the neglectful families, the higher rates of children's negatives were equally directed to the mothers and other children.

6.2.5 Summary and Discussion. Looking at total verbal interaction, we found a 20% lower frequency of parent to child interaction in the single parent families - in spite of the fact that the single parent mothers, as a group, interact with their children 35% more often than do the mothers in the intact families. In a somewhat similar manner, the rate of child to parent interaction is essentially the same for single and intact families. This seems to be due to the fact that the single parent children interact with their mothers almost twice as often as the children in the intact families. Thus, the general picture within the single parent families is one of less parent to child verbal interaction. This tendency is especially found in the control families. While the single parent mothers do talk more to their children than the intact mothers, they do not increase their rate enough to offset the absence of the father.

An extremely similar pattern is found when we examine physical contacts. For physical interaction, there is a 19% lower frequency of parent to child interaction in the single parent families, again despite the fact that single parent mothers physically interact with their children 43% more often than do the mothers in the intact families. Similarly, children in the single parent families direct physical behavior toward their mothers 26% more often than children in the intact families. Moreover, as with verbal interaction, the children are also more likely to interact with each other physically than are the children in the intact families.

A somewhat different pattern is found for positive interaction. For positive exchanges, children in the single parent families receive such parental behavior about as often as do children in intact families. Indeed, the mothers in the single parent families actually display positive behavior towards their children 34% more often than intact mothers. The only exception to this pattern is exhibited by the single parent control mothers who display a slightly lower frequency of positive behavior than the intact control mothers. Interestingly, the rate of positive interaction by the children in the single parent families is 45% higher than in the intact families.

The greatest differences between the single and intact families are found, however, when we examine negative interactions. Across all family types there is a strikingly higher frequency of negative behavior in the single parent families. For example, there is a 40% higher frequency of negative parent to child interaction in the single parent than in the intact families. Indeed, the mothers in the single parent families display negative behaviors towards their children 64% more often than the intact mothers. Similarly, the children in the single parent families display rates of negative behavior almost twice that of the children in the intact families.

Admittedly, the data described in this study must be interpreted cautiously since the single parent sample is small. Nonetheless, the data are, in many respects, consistent with the popular notion that the absence of the father from the home may place undue stress upon the mother and, thus, increase the likelihood of aversive behavior. Indeed, our failure to replicate the differences between abusive, neglectful and control families that we had found earlier with intact families seems to be due to actual differences between single and intact families rather than to the size of our sample. Whether we look at total verbal or physical interaction or positive exchanges, the pattern is one where there are generally rather small differences between single and intact abusive and neglectful families. The major differences are to be found in the control families. The children in the single parent control families receive 33% fewer verbal contacts from their mothers than do the children in the intact control families from their parents. Moreover, they receive 41% fewer physical contacts, 96% fewer positive contacts and 63% more negative parental contacts than do the children in the intact families.

The general pattern portrayed in these data may be especially likely in lower SES families such as those observed in the present study. In fact, there are a variety of factors that could exacerbate the potentially negative effects of having just one parent in the home. Such factors could include too many children in the home, births too closely spaced, one or more children with physical or behavioral abnormalities, poor parental health, drug and alcohol abuse, financial difficulties, overcrowded or inadequate living conditions, isolation from effective social support systems and a lack of effective and appropriate parenting skills (Burgess, 1978). The absence of these additional stress-producing factors could clearly mitigate any negative consequences of single parenthood. Additionally, there are, undoubtedly, circumstances where the departure of one of the parents could reduce tension and conflict within the home. In any case, these are clearly issues deserving of further observational research within the context of single parent versus intact families.

[1] The single parent data were collected after two-thirds of the two parent data had already been collected. Since the observers were more experienced with the code during the single parent data collection, analyses were conducted to determine if the differential rates, particularly for emotional affect, in the single parent data could be due to changes in the observers' behavior. These analyses were conducted by comparing the first half of the two parent families within each family type with the second half of the two parent families within each family type. These latter two parent families were observed at the same time and by the same observers as were the single parent families. No consistent pattern of differences emerged. While we cannot completely rule out the possibility that the observers' behavior changed over time, we are reasonably confident of our findings presented here. We also compared the patterns of interaction

in those single parent families where the mother was the identified abuser with those where the absent father was the official perpetrator of the abuse. The interaction patterns were remarkably similar and displayed no consistent differences.

[2] Analyses were also conducted on the commands and comply data. Within the one parent family types, no significant differences emerged. Some statistically significant differences were found between the single parent and intact families. The intact parents displayed approximately 36 more commands per hour than did the single parent mothers. This difference is statistically significant and is present across all family types, particularly within the neglectful families. The single parent mothers tended to give slightly more commands to their children than did the intact mothers, but the intact parents combined tended to give slightly more commands than did the single parent mothers. Intact families combined had a higher comply rate. This difference was present for all family types, but especially for the control families. It should be remembered that the higher rate of intact families' compliance may be a function of the higher command rate by the intact parents.

## 6.3 Patterns of Reciprocity Between Parents and Children

The explanatory perspective upon which PROJECT INTERACT is based has focused on the combined effects of psychological and sociological variables. The principal characteristic of this approach is the emphasis that is placed on the reciprocal effects family members have on one another. It is recognized that the child-caregiver relationship is not unidirectional in terms of cause and effect; rather, the child influences and affects his or her parents as well as being influenced and affected by them (c.f. Bell, 1968; Bell and Ainsworth, 1972). For example, children appear to be born with certain responses like smiling or cooing that can induce and maintain caregiver attention. Even the infant, then, is capable of attaining some control over the behavior of adults in addition to being controlled by them.

Over time, parents and children will begin to develop patterns of behavior which are mutually rewarding, or punishing. Recently, researchers have begun to explore the implications that variations in these reciprocal transactions might have for family functioning. Alexander (1973) compared families that included an adolescent who had recently run away from home with a number of control families. The parents and their runaway children displayed less reciprocal behavior than the control parents and their children. When reciprocity was greater in the runaway families, the interactions were generally negative.

Findings from clinical research have demonstrated not only an association between the degree of reciprocity in families and behavior problems, but also have suggested the existence of a direct impact of reciprocity on family functioning. In their treatment program, Alexander and Parsons (1973) found that increasing levels of supportive reciprocal interactions in families with a delinquent adolescent decreased the likelihood of recidivism. Azrin, Naster, and Jones (1975) were able to teach partners in a disrupted marriage to be more reciprocal in their interactions. As reciprocity increased between dyads, there was a concommitant rise in marital satisfaction. Preliminary evidence suggests, then, that failures in reciprocity may produce problems within the family system. One aim of the present analysis was to discover whether child abuse may be one difficulty exacerbated by low levels of or qualitatively distinct patterns of reciprocal interaction.

In addition to examining variations in the level and quality of reciprocity as a function of family type, the present analysis will also consider gender differences that may relate to reciprocity. A number of writers (Baxter et al., 1965; Ferreira, 1968; Ferreira and Winter, 1965; and Mishler and Waxler, 1968) have suggested the importance of analyzing interaction data separately as a function of the child's gender. Indeed, research indicates that children do tend to identify with the same-gender parent (Mussen and Rutherford, 1963; Mussen and Parker, 1965; and Hetherington and Frankie, 1967). Therefore, the same-gender parent may be more likely to assume responsibility for the role training of the same-gender child. These findings have implications for further analysis of the data described earlier, i.e., the child's gender may be associated with differing patterns of family interaction. Therefore, family interaction patterns are tested in abuse and control families between the child and his or her same-and-opposite-gender parent. Rates of verbal and physical behaviors, both positive and negative, were computed and correlated to assess patterns of reciprocity between parents and their children.

We were especially interested in whether role or behavior modeling of the same-and-opposite-gender parent was beginning to manifest itself in terms of reciprocal patterns of aversive behavior for the children in abusive families. These findings will be of particular interest in relation to the concept of intergenerational transmission of abusive patterns of child rearing (Parke and Collmer, 1975). That is, we hoped to discover whether the association, often reported between severe punishment as a child and later abusive behavior as a parent, might begin to manifest itself in high levels of negative reciprocity between children in our abuse sample. The findings should also be useful and have implications for developing and implementing an intervention program to teach more effective parenting skills. If the parents are differentiating their behavior towards the same-and-opposite-gender children, specific intervention for changing or modifying this behavior may need to be developed.

6.3.1 Sample. Two family types were selected for analysis: two-parent abuse and two-parent control families.

6.3.2 Response Definition: Measures of Reciprocity. Researchers such as Gottman, Notarius, Markman, Bank and Yoppi (1976) have criticized the use of correlational rather than conditional probability analyses in research on reciprocity. Gottman et. al. suggests that the correct approach to studying reciprocity involves examining the immediate influence one behavior has on another. To do this, unconditional probabilities of various behavior types are computed. Then if, for example, a positive behavior from a parent to a child increases the probability of a positive behavior being directed to that parent by the child well above the unconditional expectation, reciprocity would be said to exist.

However, the approach suggested by these researchers may seriously distort the concept of reciprocity. To begin with, one behavior may be contingent on another even though separated in time. For example, a kind remark, or an insult, given by one person to another may be reciprocated by the recipient at some future meeting rather than in the present situation. Certainly, the emphasis in the sociological literature has been on future obligations in long term exchange rather than on immediate *quid pro quo* reactions.

The basic problem involves the idea of contiguity. What Gottman et. al., are arguing is that behaviors, in order to have a reciprocal influence (presumably through a process of mutual reinforcement), must occur together.

However, the law of effect is no longer interpreted as entirely dependent on response-reinforcer contiguity. Rather, behavior is thought to be maintained by its general association (correlation) with reinforcing events (Baum, 1973). In fact, recent work by Molm (1976) has shown that social exchange between human subjects will continue so long as the level of mutual reinforcement is high even though strict contiguity between behavior and reinforcer does not exist.

Following the traditional use of reciprocity as a process which involves contingent, but not necessarily contiguous, interaction, we examined the correlations between rates of behavior for all possible dyads. As noted above, we feel that this approach is consistent with reinforcement and exchange principles. Perfect reciprocity in verbal interaction between children and parents would be said to exist if, for example, they spoke to one another at an equal rate over time.

For purposes of the present analysis, we assessed reciprocity between four classes of dyads: mothers to daughters and daughters to mothers; mothers to sons and sons to mothers; fathers to daughters and daughters to fathers; fathers to sons and sons to fathers. Thus, two sets of scores were obtained for each dyad, i.e. parent to child and child to parent. These two scores were correlated and z scores were computed to test for differences between the correlations across both gender and family type. We did this for positive and negative interaction.

6.3.3 Comparison Between Abuse and Control Families. Parent-child interaction patterns were compared for abuse and control parents, and for same-and-opposite gender children. These data can be seen in Table 8. The two groups were significantly ($p \leq .05$) different along a number of dimensions. For example, the data indicate that fathers and daughters in the abuse families are more likely to reciprocate negative behaviors than are the

## Table 8

## Differences in Reciprocity Between Abuse vs. Control Parent-Child Interaction[+]

| | Mothers | | | Fathers | | |
|---|---|---|---|---|---|---|
| | Abuse | Control | Fisher's Z | Abuse | Control | Fisher's Z |
| **Positive Interactions** | | | | | | |
| Daughters | .526** | .040 | 1.437 | -.267* | .590 | -2.516 |
| Sons | .362 | .441 | -0.249 | .749 | .843 | -0.667 |
| **Negative Interactions** | | | | | | |
| Daughters | .526* | .972 | -3.995 | .989* | .475 | 5.632 |
| Sons | .816* | .466 | 1.688 | .989* | .494 | 5.566 |

*p<.01, abuse/control comparisons

**p<.05

[+] Statistical test is Fisher's Z Transformation fathers and daughters in the control families. Similarly, fathers and sons in the abuse families reciprocate negative behaviors more often than in the control families. In contrast, the fathers and daughters in the control families tend to reciprocate their positive behavior more than do the fathers and daughters in the abuse families. There are no differences for fathers and sons in this regard.

So far as mother-child relations are concerned, mothers and sons in the abuse families, just like father-son relations, display a greater tendency to reciprocate negative behavior than do their counterparts in the control families. Conversely, the mothers and daughters in the control families reciprocate negative behavior at a higher level than the mothers and their daughters in the abuse families. Surprisingly, the mothers and daughters in the abuse families reciprocate positive behavior more often than their counterparts in the control families.

6.3.4 Gender Comparisons: Each Parent and His or Her Son(s) and Daughter(s). The data described thus far suggest that gender may influence the nature of parent-child relations. However. given the presence of differences between abuse and control families, the data in Table 9 are separated according to family type. Here we see that in the abuse families, fathers and sons are more likely to reciprocate positive behavior than are fathers and daughters. On the other hand, the level of reciprocity is especially high for negative behavior, but there are no differences for sons and daughters. A somewhat similar pattern is found in the control families. That is, fathers and sons display a higher level of reciprocal positive behavior than do fathers and daughters. For negative behavior, father-child reciprocity is rather low in the control families and there are no differences between sons and daughters.

Table 9

Test of Differences Between Each Parent and their Son(s) and Daughter(s):

Abuse and Control Families

| | | Abuse | | | Control | | |
|---|---|---|---|---|---|---|---|
| | | Correlation | 2-Tail Probability | Fisher's Z-Transformation | Correlation | 2-Tail Probability | Fisher's Z-Transformation |
| Mother | -Daughter: Positive | .525 | .037 | 0.5398 | .040 | .903 | -1.147 |
| | -Son: Positive | .362 | .362 | N.S.* | .441 | .100 | N.S.* |
| Father | -Daughter: Positive | -.267 | .317 | -3.292 | .590 | .05 | -1.465 |
| | -Son: Positive | .749 | .003 | $p < .01$ | .843 | .001 | $p < .05$ |
| Mother | -Daughter: Negative | .526 | .036 | -1.482 | .972 | .001 | 4.293 |
| | -Son: Negative | .816 | .001 | $p < .05$ | .466 | .080 | $p < .01$ |
| Father | -Daughter: Negative | .989 | .001 | 0 | .475 | .119 | -.0656 |
| | -Son: Negative | .989 | .001 | N.S.* | .494 | .061 | N.S.* |

*N.S. = Not significant at .05 level

Looking at mother-child relations, we find a different pattern. For positive exchanges there are no statistically reliable differences between mother-daughter and mother-son relations in either the abuse or the control families. It is also the case that the level of reciprocity for positive behavior is rather low in both cases. For negative behavior, however, there is a significantly higher level of mother-son reciprocity in the abuse families than there is mother-daughter reciprocity. For the control families, the opposite pattern is found, i.e., there is more mother-daughter than mother-son reciprocity for negative behavior.

6.3.5 Gender Comparisons: [illegible] Parents. So far, we have tested the effects of gender on parent-child relations from the perspective of the parent. That is, we have examined whether a father-son relationship, for example, shows more or less reciprocity than a father-daughter relationship.

The data in Table 10 allows us to test for gender-effects from the perspective of the child. Thus, we can see whether a mother-daughter relationship exhibits more or less reciprocity than a father-daughter relationship.

Looking first at the abuse families, it can be seen that mothers and daughters are more likely to reciprocate positive behavior than are fathers and their daughters. Conversely, fathers and daughters are more likely to reciprocate negative behavior than are mothers and daughters. In the control families, just the opposite pattern is found: fathers and daughters are more likely to reciprocate positive behavior than are mothers and daughters and mothers and daughters are more likely to reciprocate negative behavior than are fathers and daughters.

When we look at the parents' relationships with their sons, we find that, in the abuse as well as the control families, fathers and sons are

## Table 10

## Test Differences Between Both Parents and the Child: Abuse and Control Families

| | Abuse | | | Control | | |
|---|---|---|---|---|---|---|
| | Correlation | 2-Tail Probability | Fisher's Z-Transformation | Correlation | 2-Tail Probability | Fisher's Z-Transformation |
| Mother -Daughter: Positive | .525 | .037 | 2.291 | .040 | .903 | -1.688 |
| Father -Daughter: Positive | -.267 | .317 | $p<.01$ | .590 | .05 | $p<.01$ |
| Mother -Daughter: Negative | .526 | .036 | -5.455 | .972 | .001 | 4.172 |
| Father -Daughter: Negative | .989 | .001 | $p<.01$ | .475 | .119 | $p<.01$ |
| Mother -Son: Positive | .362 | .224 | -1.569 | .441 | .100 | -1.987 |
| Father -Son: Positive | .749 | .003 | $p<.01$ | .843 | .001 | $p<.05$ |
| Mother -Son: Negative | .816 | .001 | -3.976 | .466 | .080 | -0.014 |
| Father -Son: Negative | .989 | .001 | $p<.01$ | .494 | .061 | N.S.* |

*N.S. = Not significant at .05 level

more likely to reciprocate positive behavior than are mothers and sons. It also is the case, in the abuse families, that fathers and sons display a higher degree of reciprocity for negative behavior than do mothers and sons. For the control families, no such difference was found.

Our final concern involves the degree to which children in the abuse families are themselves interacting in a highly negative fashion. The data in Table 4 suggest that the children in the abuse families are, indeed, reciprocating their negative but not their positive behavior toward each other. In contrast, the control children, while reciprocating each other's negative behavior, also reciprocate their positive behavior. Thus, these data are at least consistent with the notion that children in abuse families may acquire patterns of reciprocating which emphasize negative interacting rather than positive transactions.

6.3.6 Summary and Discussion. Three basic questions guided the present analysis:

1. Is the quality or level of behavioral reciprocity different in abuse compared to non-abuse families?
2. Does reciprocity vary by gender in parent-child interactions?
3. Is there evidence that children within each family type are learning to reciprocate behaviors in the same fashion as their parents?

The findings reported here illustrate the importance of examining differences in reciprocity controlling for the gender of parents and children. The data indicate that our second question must be answered in the affirmative, that is, striking differences exist in patterns of interaction between parents and children depending on the gender of each. The clearest example of such gender differences occurs for fathers and sons. Regardless of family type, father-son positive interactions are more highly correlated than mother-son, mother-daughter or father-daughter positive

Table 11

Comparisons of Reciprocity Patterns

Between Siblings of Abuse and Control Families

|  | Abuse |  | Control |  |
|---|---|---|---|---|
| Children Only | Correlations | Level of Significance | Correlations | Level of Significance |
| Positives | .13 | N.S.* | .53 | $p < .001$ |
| Negatives | .45 | $p < .001$ | .40 | $p < .001$ |

*N.S. = Not significant at .05 level

transactions. Although we cannot be certain that such is the case, the correlations suggest that fathers and sons are particularly responsive to one another on a positive dimension and that a special relationship describes this male-male bond.

For all measures of reciprocity other than positive interactions with their sons, the fathers in the abuse group differed from controls. They demonstrated a lower level of positive reciprocity with their daughters than control fathers and higher levels of negative reciprocity with both their sons and daughters than controls. This latter finding is especially interesting since it is the mothers in the abuse families who display an especially high rate of negative behavior. On the average, their rate of negative behavior towards their children is more than 60% higher than for mothers in the control families and 33% higher than their husbands. In contrast, the fathers in the abuse families do not exhibit a significantly higher rate of negative behavior than do the control fathers. Evidently, the important difference between abuse and control fathers lies not in absolute rates of positive and negative behaviors, but in the pattern of parent-child reciprocity. Abuse fathers may fail to reciprocate the positive behaviors of their daughters but they show a remarkable consistency in response to the negative behaviors of their sons and daughters.

For mothers, the findings are less clear than those for fathers. Neither the abuse nor the control mothers were more reciprocal in a positive fashion to children of either sex as was found for fathers and sons. Abuse mothers and daughters were more positively reciprocal and less negatively reciprocal than control mothers and daughters. On the other hand, the abuse mother-son dyads were more reciprocal in their negative interactions than controls. No clear trend of negative or positive reciprocity serves to distinguish control and abuse mothers. Apparently, then, abusive mothers are behaviorally most distinct from control mothers because of their differing rates of interaction rather than their patterns of reciprocity. That is, they interact less often with their children than controls and are more negative but less positive when they do interact with their children.

In an attempt to understand these data better, we looked at the abuse families more closely by comparing the abuser-victim dyad to the abuser-non-victim dyad and non-abuser-victim dyad. These comparisons were made for eleven intact families where only one parent had been cited for abuse and where the abuse was selective, ie., where not all children in the family were presumably abused. One of the more interesting findings from this analysis is that the children in these families are more likely to reciprocate the abusers' positive behaviors and the nonabusers' negative behaviors. This is true for non-victims as well as victims. One interpretation of these data is that the children's negative behaviors are quickly supressed by counter responses from the abusive parent. Similarly, they may reciprocate that same parent's positive contacts to them to reduce the liklihood of abusive behavior. These data should, however, be considered only suggestive. The sample is obviously small and, as a consequence, the correlation coefficients are likely to be unstable.

Still other analyses of the data suggest that reciprocity fails in negative interactions between abusive parents. These findings suggest that abuse fathers may coerce their mates by using negative behaviors to increase the positive responses they receive from them.

Our final question concerned the degree to which children from the abuse families may be emulating the styles of reciprocity modeled by their parents. The results showed some evidence that these children are not reciprocal in their positive transactions but moderately so in their negative behaviors.

These findings are, of course, limited to a relatively small sample of predominantly rural families from Central Pennsylvania. The generality of the findings can only be tested through replications of the study in other settings. However, interesting differences in reciprocity were found between family types and across varying combinations of parent-child dyads. Further analyses will assess the contiguous response contingencies that operate in these families. Conditional probability analyses will be employed to discover which particular behaviors immediately precede or follow one another.

Nonetheless, these data, however preliminary, suggest that it is important for clinicians to note whether mothers and fathers interact differently with their children. In designing parental effectiveness programs we must consider these individual parental differences. A program designed for the parents may not be as useful as a program designed with each individual parent as well as the parents together in mind. The results of this study and earlier findings would suggest that clinicians should look to the rates of behavior emitted by abuse mothers and that they give special attention to the patterns of interaction exhibited by abuse fathers and their children. Hence, individual parental differences may be very important.

For our sample, at least, we know that mothers and fathers interact differently with their sons and daughters. In addition, however, it is important to know whether these parents interact similarly with others in their environment or whether these interaction styles are unique to their family system. Such data would provide us with information concerning the origin of the pathology. Identifying the origin of the interaction patterns would inform clinicians whether these interaction styles occur solely in stressful situations, or if these interaction styles occur regardless of the environment. From the reciprocity patterns presented, it appears that the abusive parents' negative style of interacting with their children may be perpetuating itself in the children's relationships with their siblings. However, it is not clear if this transference is a result of the individual parent or of the family system. Hence, we need to find out if the parents would interact similarly in a non-stressful situation. This information is essential for clinicians in designing intervention programs In any event, an emphasis on individual characteristics, the social relationship, itself, and environmental characteristics would be most useful in implementing a strategy for changing deviant parenting practices.

## 6.4 Family Interaction and Family Size

As noted above, the consistent absence of one parent from the home may place added stress on the remaining parent and, thus, increase the likelihood of coercive behavior. Another potential cause of stress in families is the number of children in the home. Research suggests that an inverse relationship exists between family size and other variables such as a family's standard of living (Douglas and Bloomfield, 1958), level of health and physical development (Tanner, 1968), nutrition (U.S. Commission on Population Growth and the American Future, 1972) and infant mortality (Wray, 1971). There are data which even suggest that intelligence may be adversely affected by family size (Belmont and Marolla, 1973; Zajonoc and Markus, 1975). These data have led some researchers (e.g., Blackburn, 1974) to argue that membership in a larger family may create deprivation across physical, emotional and cognitive domains. Certainly, parental time and energy are limited resources and it seems reasonable that their allocation per child may decrease as family size increases.

The purpose of the present analysis, therefore, was to determine whether patterns of interaction in families are affected by the size of those families. To examine this question, we correlated rates of interaction with the number of children in the families. These correlation coefficients were computed in two ways. At the level of the entire family (Total Family, Parents, Mother, Father, Children) we simply correlated rates of behavior with the number of children in the family. At the dyadic level (e.g., mother to child or child to child) we corrected for family size by correlating the number of children in the family with the rates of behavior between the parents and any one child. The "child's" rate was, an average figure derived from the rates for each child in the family divided by the number of children in that family.

6.4.1 Total Verbal Interaction: Intact Families. At the level of the entire family, there was a strong positive correlation between the size of a family and the amount of verbal interaction (Table 12). It is clear that this is due to the input of the additional children in the larger families, for the highest positive correlations are found for the children. Indeed, for the mothers, there are no significant correlations between their rate of verbal behavior and the size of the family, while for the fathers there is a fairly strong negative correlation between their verbal output and the size of their family.

At the dyadic level, some striking results are found. For the parents together, as well as for the mothers and fathers separately, there are consistently high negative correlations between their behavior towards any given child and the number of children in the home. Clearly, the larger the family, the less parental contact any one child receives. It is as if parental investment were a fixed commodity with ever smaller shares being allocated the more children there are.

Interestingly, the same pattern holds for child to parent verbal contacts, but for probably quite different reasons. For example, any given child's contact with a parent may be restricted by competing behaviors from siblings for the attention of the parent. Additionally, the reduced child to parent verbalization may be due to simply higher levels of sibling interaction. This latter possibility is certainly suggested by the strong positive correlation between family size and the rate of child to child verbal interaction.

Finally, with the exception of the control families, there are no statistically significant correlations between family size and interaction between the parents, though there is a consistent negative trend. In fact, the negative correlation between family size and wife to husband verbalization in the control families may be significant theoretically and practically as well as statistically. To perform her parental function, the mother in a larger family may simply be forced to spend less time with her husband. Actually, the fathers in the control families tend to display the same pattern as their wives.

6.4.2 Single Parent Families. There are two different patterns found in the single parent families compared to the two-parent families. First, in the single parent abusive families we find a strong negative correlation between the number of children in the home and the frequency of their contacts with their mother. In this case, the lower frequency of child to mother contacts in the larger families is clearly not due to higher levels of sibling interaction. On the other hand, it may be due either to competing demands for the mothers' attention or, simply, to less family interaction, overall. Most likely, both processes are operating.

The other major departure from the pattern found in the two parent families is the rather surprising positive correlation between the number of

## Table 12

### Correlations for Total Verbal Interaction as a Function of Family Size in Intact Families*

| Family Type | Combined | Abuse | Neglect | Control |
|---|---|---|---|---|
| Total Family | +.67 | +.73 | +.76 | +.56 |
| Parents | -.46 | -.63 | - | -.44 |
| Mother | - | - | - | - |
| Father | -.43 | -.57 | - | -.59 |
| Children | +.82 | +.84 | +.88 | +.75 |
| Parents to Child | -.81 | -.79 | -.81 | -.86 |
| Mother to Child | -.65 | -.63 | -.72 | -.63 |
| Father to Child | -.72 | -.78 | -.61 | -.78 |
| Child to Parents | -.67 | -.70 | -.63 | -.68 |
| Child to Mother | -.44 | -.46 | -.59 | - |
| Child to Father | -.54 | -.66 | - | -.62 |
| Child to Child | +.70 | +.77 | +.68 | +.67 |
| Mother to Father | - | - | - | -.40 |
| Father to Mother | - | - | - | - |

### Correlations for Total Verbal Interaction as a Function of Family Size in Single Parent Families*

| Family Type | Combined | Abuse | Neglect | Control |
|---|---|---|---|---|
| Total Family | + | - | + | + |
| Mother | - | - | -.73 | + |
| Children | + | - | +.80 | - |
| Mother to Child | + | -.69 | -.86 | +.72 |
| Child to Mother | + | -.82 | -.92 | +.70 |
| Child to Child | + | - | + | + |

*For those correlations which failed to reach statistical significance (p ≤ .05), only the direction of the correlation is noted.

children in the home and mother to child interaction in the single parent control families. The explanations for this are by no means clear. I will consider one possibility when I discuss the frequency of positive and negative exchanges.

### 6.4.3 Positive Verbal and Physical Interaction:

Intact Families. The first thing that is apparent when examining positive interaction (Table 13) is that there is no obvious positive correlation between the size of the family and positive parent-child contacts. The parents actually display no significant differences in their rate of positive behavior as a function of family size. The one exception to this is the fathers in the control families who do exhibit a statistically significant negative correlation between their rate of positive behavior and the size of the family, though the size of the correlation is not too large.

As was the case for total verbal interaction, the children actually show a positive correlation between their positive behavior and the size of the family. In this case, however, the correlations are neither strong nor statistically significant for the neglect or control families.

Generally speaking, we again find negative correlations between parent-child interaction and the size of the family. Those correlations that meet our level of statistical significance, i.e., at least .05, are found for all but the neglect families. Given the relatively low frequencies of positive interaction in neglect families, this fact is not surprising. For example, while the mean for total verbalizations is close to 20 responses per minute, the figure for verbal and physical positive behaviors is only once per minute. Under the circumstances, the number of statistically significant correlations is rather impressive. This is especially true for the control

## Table 13

### Correlations for Positive Verbal and Physical Interaction as a Function of Family Size in Intact Families[*]

| Family Type | Combined | Abuse | Neglect | Control |
|---|---|---|---|---|
| Total Family | + | + | + | - |
| Parents | - | - | - | - |
| Mother | - | + | - | - |
| Father | - | - | - | -.39 |
| Children | +.34 | +.42 | + | + |
| Parents to Child | -.43 | -.43 | - | -.57 |
| Mother to Child | -.35 | - | - | -.48 |
| Father to Child | -.43 | -.45 | - | -.55 |
| Child to Parents | -.31 | - | - | -.47 |
| Child to Mother | -.26 | - | - | -.39 |
| Child to Father | -.27 | - | - | - |
| Child to Child | +.29 | + | + | + |
| Mother to Father | + | + | + | - |
| Father to Mother | + | + | + | - |

### Correlations for Positive Verbal and Physical Interaction as a Function of Family Size in Single Parent Families[*]

| Family Type | Combined | Abuse | Neglect | Control |
|---|---|---|---|---|
| Total Family | + | - | + | + |
| Mother | + | - | - | + |
| Children | + | - | + | + |
| Mother to Child | + | -.78 | -.62 | +.70 |
| Child to Mother | + | -.70 | -.70 | + |
| Child to Child | + | - | + | + |

[*] For those correlations which failed to reach statistical significance ($p \leq .05$), only the direction of the correlation is noted.

families. The message is clear, the more children there are in the home, the lower the frequency of positive contacts between a child and a parent.

6.4.4 Single Parent Families. For both the abuse and the neglect families we find the same trend as was evident in the intact families. That is, family size is inversely correlated with the frequency of positive parent-child exchanges. Indeed, the correlations are considerably higher in the single parent abusive and neglectful families than they were in the control intact families.

Again, the single parent control families present an anomalous pattern. As for total verbalizations, we find a positive correlation between the frequency of parent to child positive contacts and the number of children in the home. As before, the explanation for this pattern is elusive. One possible explanation is that, as the size of the family increases, the frequency of parent-child interaction not only increases, it also becomes more emotionally charged. This explanation is strengthened when we examine negative exchanges as well as those of a positive nature.

6.4.5 Negative Verbal and Physical Interaction:

Intact Families. When we look at negative interaction, a different pattern emerges from what we have seen before (Table 14). At the level of the family as a whole, for example, there are moderate, but consistent, positive correlations between the frequency of negative contacts and the number of children in the home. The sole exception to this pattern is found in the neglect families that also happen to display the highest frequencies of negative behavior. Indeed, their rate of negative verbal and physical behavior is more than 50% higher than in the control families. Apparently, this pattern holds regardless of the size of the neglect families.

Perhaps the most interesting feature about negative exchanges is the fact that the only statistically significant correlations are positive in

## Table 14

## Correlations for Negative Verbal and Physical Interaction as a Function of Family Size in Intact Families*

| Negative Affect Verbal and Physical | Combined | Abuse | Neglect | Control |
|---|---|---|---|---|
| Total Family | +.37 | +.53 | + | +.48 |
| Parents | + | + | + | + |
| Mother | + | + | + | + |
| Father | + | + | + | - |
| Children | +.43 | +.62 | - | +.62 |
| Parents to Child | - | - | - | - |
| Mother to Child | - | - | - | - |
| Father to Child | - | + | - | - |
| Child to Parents | - | + | - | - |
| Child to Mother | - | - | - | + |
| Child to Father | - | + | - | - |
| Child to Child | +.35 | +.69 | - | +.42 |
| Mother to Father | + | + | + | + |
| Father to Mother | + | + | - | - |

## Correlations for Negative Verbal and Physical Interaction as a Function of Family Size in Single Parent Families*

| Negative Affect Verbal and Physical | Combined | Abuse | Neglect | Control |
|---|---|---|---|---|
| Total Family | + | - | - | + |
| Mother | + | +.66 | - | + |
| Children | + | - | + | + |
| Mother to Child | - | - | - | + |
| Child to Mother | - | -.69 | -.74 | + |
| Child to Child | + | - | - | + |

*For those correlations which failed to reach statistical significance ($p \leq .05$), only the direction of the correlation is noted.

direction. It is also the case that these correlations are found for the children in their relationships with one another. But this is one of those seemingly paradoxical cases where statistically nonsignificant findings are, by their nonsignificance, theoretically and practically quite significant, indeed. Basically, what these small nonsignificant correlations are telling us is that, in contrast to overall verbal behavior as well as positive verbal and physical behavior, here we do not find a reduction in contacts as the size of the family increases. In other words, if there is coercive behavior in a family, making that family larger apparently exacerbates the problem in the sense that these negative interactions occur within a context of fewer positive parent-child contacts.

6.4.6 Single Parent Families. The single parent families display the same general pattern as that found for the intact families. Especially noteworthy are the mothers in the single parent abusive families who display a strong positive correlation between the frequency of their negative behavior and the number of children in the home. This pattern does not hold in the neglect families where we find that the frequency of negative maternal behavior does not significantly change as family size increases.

The control single parent families again present an interesting pattern. While none of the correlations is statistically significant, they are all positive in nature. This finding is interesting, especially in the light of the fact that the children in the single parent control families receive 63% more negative parental contacts than do the children in the intact control families. While there is a trend towards an increase in this pattern as family size increases, the fact remains that the pattern holds regardless of the number of children in the home. In any event, these data when combined with those for positive interaction, do suggest that the single parent control families are emotionally charged negatively and positively.

6.4.7 Conclusion. For now, we can best conclude that patterns of family interaction have provided data indicating that as family membership increases, total contacts of both a physical and verbal nature decrease significantly, especially between a parent and his or her child. Notable exceptions to this finding are overall child to child interactions and negative parental behavior. In sum, those interaction patterns characteristic of abusive and neglectful families that we have examined earlier such as lower frequencies of verbal interaction, lower levels of positive exchanges and higher frequencies of negative exchanges seem to be especially likely the larger the family.

## 6.5 Life Change and Perceptions of Illness

So far we have seen that both single parenthood and family size may increase the frequency of coercive family behavior and decrease the frequency of positive exchange. These data are certainly consistent with the notion that social and psychological stress may increase the probability of child abuse. In the present analysis, stress will be equated with the rapidity of change in life events experienced by families.

In addition to stress, another factor thought to influence abusive behavior is a parents' self-concept. For example, abusers are often characterized as feeling inferior or being self-centered (Spinetta and Rigler, 1972). This second aspect of caretaker violence will also be explored in this analysis.

Early in this century Adolf Meyer, professor of psychiatry at Johns Hopkins, used "life charts" to show the relationship between biological, psychological, and social occurrences and illness (Lief, 1948). In 1949 Holmes used Meyer's life-chart concept and, after examining more than 5,000 case histories, found that life changes tended to increase during the two years before the occurrence of major illnesses. Continuing research has shown that diseases such as tuberculosis, many skin ailments, inguinal hernia, coronary occlusion, congestive heart failure, ulcerative colitis, lymphomas, and leukemias are more likely to occur with the rapid accumulation of life changes (Holmes and Holmes, 1975, p. 49).

Recent studies, however, have focused not only on the relationship between life change and the onset of physical health problems, but also on the degree to which life change can negatively influence ongoing behavior. For example, Harris (1972), using the Schedule of Recent experience (Rahe, 1969), demonstrated an inverse relationship between magnitude of life change and grade-point average in college freshmen, regardless of the level of college readiness. Another illustration of the detrimental impact of life change on behavior is seen in the results of a study by Carranza (1972). He investigated the effect of life changes on performance of high school teachers. The results of Carranza's research showed a generally negative relationship between increasing amounts of life change and effective teaching behavior.

Another study combined the Schedule of Recent Experience (SRE) with the Cornell Medical Index (CMI), a measure of both physical and emotional well-being, in order to predict the illness behavior and eventual dropout rate of participants in a particularly stressful U. S. Navy training program (Rahe, Biersner, Ryman and Arthur, 1972). Scores on both measures were positively related to dispensary visits by the respondents; however, while SRE scores showed a positive correlation with illness severity and concomitant training termination, increasing CMI scores were associated with voluntarily dropping from the program even with slight or nonexistent medical problems. Thus, the use of both these measures predicts future problems in performance. However, while CMI scores show a negative relationship with desired behaviors even in the absence of real medical problems, the SRE scores are positively related to substantial health impairments which, in turn, predict performance deficits. For our purposes, the CMI questionnaire is especially important as an addendum to a life change scale since it taps many of the emotional factors, e.g., low self-esteem, which have been suggested to increase the probability of an abusive incident.

A specific test of the relationship between life change and child abuse has been conducted by Justice and Duncan (1976). As predicted, they found a significant difference between life change scores for abusing parents and a matched control group. These authors explain their findings in terms of Selye's (1956) theory of stress. According to Selye, when life events change too rapidly, people become so exhausted by the strain of coping that they eventually lose control over their situation. When controls weaken, Justice and Duncan suggest, the chance increases that a parent will act out in an inappropriate manner, e.g., by abusing a child. Justice and Duncan also suggest that abusing parents contend with one another to have their personal needs met and, when they fail, are more likely to become abusive. However, they never draw a logical connection between this process of symbiosis and life change nor do they test for statistica interactions between the two.

Assuming that adequate childrearing represents a repertoire of skilled performances, the research cited thus far is consistent with the idea that rapid life change will have a negative influence on such behavior. However, it is unclear that a primary reaction to stress is interpersonal aggression; rather, research evidence supports the notion that a voilent outburst in response to stressful situations is likely to be, in large part, a learned behavior (Bandura, 1973). Therefore, the work reported here will include an examination of learning history as it interacts with current life stress. In addition, the study by Rahe and his associates (1972) shows a performance decrement for those respondents exhibiting emotional problems as measured by the Cornell Medical Index. The influence of perceived physical or emotional ill health on child abuse will also be examined here both as a main effect and in interaction with learning experiences.

6.5.1 Measures and Sample. The two questionnaires used in this analysis are the Schedule of Recent Experience (SRE), also known as the Social Readjustment Rating Scale (Holmes and Rahe, 1967), for scoring recent life changes and the Cornell Medical Index (CMI) for assessing perceptions of physical and emotional well-being. Research assistants gave the forms to each parent (20 abuse and 20 control) independently and remained in the room to answer any questions which arose. The SRE scores reported here represent the period of time before the last reported incident of abuse, usually encompassing two or more years. The scores for each matched control cover the same time span. (So far we have only been able to analyze data from a portion of the two-parent sample.) The items in the SRE questionnaire and their life change weights are shown in Table 15.

The SRE is used to quantify life change where items are weighted according to their empirically derived influence on future health. Mild life crisis is usually defined as 150-199 Life Change Units (LCU), moderate life crisis as 200-299 LCU and major life crisis as 300 or more LCU. The two-year period following a cluster of life changes is the time when a subject is "at risk" for negative health or behavior influences (Holmes and Masuda, 1973:175).

The CMI can be scored in several ways; however, of primary interest here is the degree of presumed emotional disturbance. Thirty or more yes answers to the 195 item questionnaire suggest emotional disturbance as do

TABLE 15

LIFE CHANGE ITEMS IN THE SCHEDULE OF RECENT EXPERIENCE

| No. | | Life Change Unit Value |
|---|---|---|
| 1. | Marriage | 50 |
| 2. | Troubles with boss | 23 |
| 3. | Detention in jail or other institution | 63 |
| 4. | Death of spouse | 100 |
| 5. | Major change in sleeping habits | 16 |
| 6. | Death of a close family member | 63 |
| 7. | Major change in eating habits | 15 |
| 8. | Foreclosure on a mortgage or loan | 30 |
| 9. | Revision of personal habits | 24 |
| 10. | Death of a close friend | 37 |
| 11. | Minor violations of the law | 11 |
| 12. | Outstanding personal achievement | 28 |
| 13. | Pregnancy | 40 |
| 14. | Change in health of family member | 44 |
| 15. | Sexual difficulties | 39 |
| 16. | Trouble with in-laws | 29 |
| 17. | Change in number of family get-togethers | 15 |
| 18. | Change in financial state | 38 |
| 19. | Gain of new family member | 39 |
| 20. | Change in residence | 20 |
| 21. | Son or daughter leaving home | 29 |
| 22. | Marital separation | 65 |
| 23. | Change in church activities | 19 |
| 24. | Marital reconciliation | 45 |
| 25. | Fired at work | 47 |
| 26. | Divorce | 73 |
| 27. | Change to different line of work | 36 |
| 28. | Change in number of arguments with spouse | 35 |
| 29. | Change in responsibilities at work | 29 |
| 30. | Begin or stop work outside of home | 26 |
| 31. | Change in work hours or conditions | 20 |
| 32. | Change in recreation | 19 |
| 33. | Mortgage over $10,000 | 31 |
| 34. | Mortgage or loan less than $10,000 | 17 |
| 35. | Personal injury or illness | 53 |
| 36. | Business readjustment | 39 |
| 37. | Change in social activities | 18 |
| 38. | Change in living conditions | 25 |
| 39. | Retirement from work | 45 |
| 40. | Vacation | 13 |
| 41. | Change in schools | 20 |
| 42. | Begin or end school | 26 |

3 or more yes responses on the last page. Similarly, 3 or more yes responses in sections 1 and J or 4 or more ambiguous responses also indicate emotional problems. Ambiguous responses are defined in several ways; however, very few of these respondents, two in each family category, met these criteria so this particular dimension was dropped from further analysis.

In addition to the CMI and SRE, one item was used from the "Survey on Bringing Up Children" developed by Helfer and Schneider (1974). This survey was another measure used in the larger project from which these materials originated and was administered to parents in the same fashion as the CMI and SRE. The particular question used from this instrument helps to specify childhood experiences which might influence whether life change or illness result in severely distorted childrearing practices. The question asked whether the respondent, or his or her siblings, had been severely punished as children. Subjects answered on a seven point scale with strongly agree scored 1, neither agree nor disagree scored 4, and strongly disagree scored 7.

6.5.2 Results. Table 16 shows that the abuse parents differ from their respective controls in terms of average number of life change units (LCU). The abuse-control difference is statistically significant ($p < .025$) using the Wilcoxon matched-pairs, signed ranks test. This degree of significance is impressive given the small sample size and the conservative nature of the test employed (Blalock, 1972). Subdivisions of the data by parental sex or by perpetrator produced no significant differences. Evidently, life change experienced by either spouse has ramifications for the other.

Given the small sample, only specific item on the life change schedule was significantly different, i.e., personal injury or illness ($p < .05$). Analyses to date tend to show that controls are more likely to

## TABLE 16

### MEAN LIFE CHANGE DIFFERENCES FOR ABUSE AND CONTROL FAMILIES

| | Abuse | Control | Significance |
|---|---|---|---|
| $\bar{X}$ Life Change Score | 340.2 | 244.4 | $p \leq .025$ |
| $\bar{X}$ Health of Injury Change | 39.0 | 13.25 | $p \leq .05$ |
| Percentage Reporting Health Change | 40 | 15 | |
| Total Parents: | 18 | 20 | |

experience positive life changes, e.g., "outstanding personal achievement," while abusive parents are more likely to encounter negative life events, e.g., becoming injured or ill.

In order to test the interaction between current life crisis and learning history, Table 17 was constructed. The data in Table 17 for abuse parents and their controls present a cross-tabulation of life crisis, dichotomized into mild or none and moderate or severe, with agreement or disagreement on the question "When I was a child my parents used severe physical punishment on me or at least one of my siblings." Abuse parents reported higher agreement with this latter test item than controls (mean difference = 1.65, $p < .025$, Wilcoxon test). Respondents who neither agreed nor disagreed with the statement were removed from the analysis leaving 17 subjects in the abuse group, 18 in the control.

As Table 17 shows, 47 percent of the abuse parents who remain in the sample after dichotomizing the punishment question agree they were or a sibling was severely punished as a child. Only 6 percent of the controls respond similarly. In addition, 41 percent of the abuse parents both agree that severe punishment occurred in their family of origin and also report experiencing moderate to severe life change at the time of the abuse incident. None of the control parents fall into that cell of the table. Clearly, the data suggest that a combination of particular childhood experiences together with rapid life change were an influence on the occurrence of child abuse for this sample. Indeed, these abuse parents or their siblings may have been most severely punished when their caretakers were under stress and this experience seemingly has acted as a model for their own reaction to life crisis.

Table 18 provides similar findings for scores on the CMI. The mean score for abusive parents is higher in each category than for controls. The

## TABLE 17

## LIFE CRISIS BY PUNISHMENT AS A CHILD FOR ABUSIVE AND CONTROL PARENTS (IN PERCENT)

**ABUSE**

| | | Life Crisis | | |
|---|---|---|---|---|
| | | Mild or None | Moderate or Severe | |
| Severe hildhood unishment | Agree | 6 | 41 | 47 |
| | Disagree | 24 | 29 | 53 |
| | | 30 | 70 | 100 |

n = 17

**CONTROL**

| | Life Crisis | | |
|---|---|---|---|
| | Mild or None | Moderate or Severe | |
| Agree | 6 | 0 | 6 |
| Disagree | 39 | 55 | 94 |
| | 45 | 55 | 100 |

n = 18

first three response categories, total yes, yes responses on sections I and J, and agreements on the last page of the questionnaire all suggest emotional disturbance. The abuse parents show a statistically significant difference on the first and third of these categories when compared with their control counterparts. The last CMI category in Table 18 represents the total yes responses on all questions except the last page which deals primarily with emotional problems. The earlier sections explore symptoms which might indicate illness in particular body organ systems. Here too, abuse parents generally score higher than controls, a finding which is consistent with the greater number of illness reports on the SRE for the abuse group. While the CMI scores are significantly higher for abusive parents than their controls, the entire population of this study has an extremely large number of yes responses. For example, Rahe, et al., (1972) report an average total CMI score of only 10.8 for a general Navy population which is considerably lower than the mean of 24.2 for our control group. Apparently, the poor life circumstances of all the parents in this study are partially reflected in the resultant scores. Should these data be compared with scores by parents more representative of the general population we would expect the abuse parents would be even more remarkable in their deviation from the norm.

Additional analysis showed that affirmitive responses on the CMI interact with learning experiences to distinguish further abuse from control parents. While this latter interaction is not nearly so dramatic as in the case of life crisis, fully 27 percent of the abusive parents score thirty or more yes responses on the CMI and agree their parents were severely punitive while none of the controls fits into the same combined category.

## TABLE 18

## MEAN SCORES ON THE CORNELL MEDICAL INDEX FOR ABUSE AND CONTROL FAMILIES++

| Families | Total Yes Responses | Yes Responses on Sections I & J | Yes Responses on Last Page | Total Minus the last page | N |
|---|---|---|---|---|---|
| Abuse | 37.9* | 2.6 | 9.3*** | 28.6** | 16+ |
| Abuse Control | 24.2 | 1.9 | 6.7 | 17.5 | 20 |

---

+The lower n for the abuse group occurred because questionnaire forms arrived after the first 4 families were interviewed.

*$p < .01$
**$p < .025$
***$p < .10$

++Significance figures were computed using the Wilcoxon matched-pairs, signed ranks test.

6.5.3 Discussion. While post hoc explanations for previously occurring events are less satisfactory than the prediction of particular phenomena in advance, the findings in the present analysis grew logically from previous research and theory. Indeed, prospective studies as well have shown the predictive validity of CMI and life change scores (Holes and Masude, 1973; Rahe, et. al., 1972). The extension of the life change paradigm from physical to social deviations offers an interesting new tool for the study of social behavior and its correlates with physical and emotional health. The data contained herein suggest that those interested in predicting the occurrence of a child abuse event would do well to investigate not only parental childhood experiences and current perceptions of children but also the interaction between these two factors and life change recently experienced by the parent. Moreover, the parent's perception of his or her physical or emotional well-being must be considered as well.

The results from this analysis are limited by the small number of parents involved. However, given the statistically significant differences found with such a small number of cases, it seems safe to conclude that life change, perceptions of physical or emotional ill-health and a punitive family of origin are factors much more characteristic of this sample of abusive than of control parents. Importantly, we have added to the findings of Justice and Duncan (1976) by showing a direct interaction between life crisis and learning experiences rather than seeing them only as independently related to child abuse.

Also clear from the present results is the conclusion that only part of the abuse problem appears to hinge on the factors studies here. While 47 percent of the abusive parents felt their own caretakers were severe disciplinarians, fully 53 percent did not. In addition, while 70 percent of the abusive parents were experiencing moderate or severe life crisis at the time of the abuse incident, 30 percent of them were not. Rather than conclude that these factors either singly or in combination determine an abuse incident, they should be seen as two of several possible variables which influence harsh treatment of children. Untouched by the current analysis are several events which probably precipitate an abuse incident. For example, child behaviors and other situational factors surely provide the immediate grist which determines whether one parent will physically injure a child while another will not. Life crisis, physical and emotional health plus childhood experiences of a particular type are predisposing events which turn the similar situations which all parents face into an abusive encounter in one instance while not in another.

In attempting to generalize the results of this analysis, the age range of the children involved must be considered. The victims of mistreatment here were generally older than those found in the usual analyses of the "battered-child syndrome." In fact, they were all beyond infancy, some of them entering the early adolescent period. It is likely, therefore, that most parents included in this sample had functioned well enough as caretakers to raise their children through the first few years of life. Unlike some other parents who have been similarly labeled for much more severe offenses, i.e., situations where children have been removed from the home or died from their injuries, parents of the type reported in this analysis would seem to be particularly well-suited for intervention efforts which must take into consideration both the parent's childrearing history as well as current life circumstances. Indeed, these data suggest that an important component in any treatment program would be the opportunity to learn new responses to stress situations which, in turn, may help improve a rather bleak picture of one's emotional status.

### 6.6 The E. Family: A Case Study.

In the next two sections, I will be describing our work with one single-parent abuse family. This is a family we worked with on a regular basis for almost eight months. In the present section, I will describe in an informal manner the various members of the family. This information is derived from the project's observers' field notes over the eight months. In the next section, I will describe our attempts to teach this family more positive ways of interacting with one another.

6.6.1. Introduction. The E. family is truly a multifaceted set of people and relationships. Those with whom we had direct contact were Nancy the mother, who is 33 years old: Charlene , who is 15 years old: Gary, who is 11 years old; Allen, who is 10 years old; and Michael, who is 4 years old. Though we visited the family twice a week, we had only intermittent contact with Charlene . In part, this was due to a live-in babysitting job she had for approximately one month. Additionally, Charlene , at times, would refuse to participate in our visits sometimes to the extent of remaining in her bedroom or at a neighbor's house the entire period. The temporary live-in babysitting job and the events surrounding it are particularly good illustrations of Charlene's behavior and personality and will be described later.

Of the children mentioned above, Allen and Michael are full siblings. They come from the union of George and Nancy E. Charlene and Gary are also full siblings. They, however, come from the union of George E. and Nancy's sister Patricia. Patricia was George's second wife but was married to George prior to Nancy. In addition to Charlene and Gary five other children were born of this union. The two eldest (both female) are living in New York at this time. The others reside in Pennsylvania and have contact with Nancy and the younger children. They are Carol, 19 years old: Chris 17; and George, 16 years old.

Before these children became Nancy's stepchildren, they were already related to her as nieces and nephews.

George E. (the father) was the perpetrator of abuse in the family. He was involved in a great deal of physical aggression (beatings) toward Charlene and Chris in particular. We are also aware that he threw boiling hot water on Charlene. Additionally, Nancy has told us that he used to beat her as well and was incessantly jealous. Nancy and George have been divorced and George has returned to New York. Throughout most of our contact with the family, Nancy, Charlene, and the three youngest boys lived in a dilapidated house in Spruce Creek, PA. Due to the irrational behavior and demands of their landlord (also their closest neighbor), they moved to Lewistown during our final set of visits. Carol presently lives with her husband, Bing, and their one year old son, Jason, in a trailer not far from Spruce Creek. George, Junior, also lives there. Chris and her boyfriend, Ray, live in an apartment in Lewistown about 25 miles from Spruce Creek. When Nancy and the youngest children lived in Spruce Creek, they maintained fairly constant contact with Carol, Bing, and Jason. In fact, since Bing had a car, they used to visit one another about two or three times a week. Nancy often relied on Bing to take her shopping or run other errands. Chris and Ray managed to be in touch with Nancy on an average of once a week. Now that Nancy has moved, the situation is reversed. Instead, Nancy and the three youngest boys reside very near Chris and Ray and have more constant contact with them. Charlene chose to live with Carol and Bing.

Nancy enjoys seeing her grandson, Jason, very much. Charlene also enjoys him and seems to have a close bond with Carol and Bing. During the winter and early spring, she often spent weekends at their trailer instead of Nancy's house. Relationships within the family seem to vacillate, however.

Periodically, and often as a result of subtleties known only within the family, new alignments would be revealed. Often these were temporary and the relationship would revert to its present status. Charlene seems most involved in these changing alignments. Her close relationship with Carol and Bing waned for several weeks and has only recently been strengthened.

6.6.2. Nancy. Nancy seems to have affection for all nine of the children mentioned. She cares for them all and worries about their welfare. Despite the fact that she sometimes has trouble managing the younger children, she seems to take a certain amount of pride in all of them. She reports, however, that Hannahmae gives her the most trouble. This relationship between Betty and Hannahmae is the most conflictual, followed by the relationships Hannahmae has with others in the family. We will return to this later.

Though Nancy is only 33 years old, she has the appearance of a woman considerably older. She seems to be conscious of her physical appearance but does not keep herself groomed very neatly nor wear flattering clothes. Her clothes are old and do not fit her well. Her hair was cut by the woman down the road and does not have much style. Occassionally, she curls it, making her somewhat more attractive. Though she does not look obese, Nancy's stomach protrudes significantly, often making it hard for her to keep her pants snapped. Sometimes she complains of various abdominal pains. Just about all of Nancy's teeth are rotten. Her mouth smells because of this.

Though the house they live in is rather run down and dilapidated, Nancy does her best to decorate and keep it clean. She obviously cares how it looks. For Christmas she even made some decorations by hand and hung them around the house. She is a conscientious mother and worries about things such as the boys' teeth and whether or not they wear their glasses when they are supposed to. She enjoys giving the children treats and would much rather treat them than punish them. Though she often tells the boys to do their homework, she does not seem as concerned as many parents about their performance in school. Despite being a high school graduate herself, Nancy's strength seems to be in the area of common sense rather than grasping new concepts.

Nancy issues commands to the boys regularly but not unnecessarily. Many times she is inconsistent or vague. She often uses phrases such as "cool it", or "stop it", or "behave". Although she is usually patient and does not have unrealistic expectations, she often uses physical punishment when they do not obey her. In fact, she is quite physical with them, though in no way malicious. More often this is in a neutral or negative way rather than a positive or affectionate manner. Infrequently, we have seen Nancy be very positive and affectionate. This occurs most often with Michael and Allen.

During our visits, it seemed as though many of Nancy's commands are due to the fact that outsiders (or "company") is present. Nancy becomes particularly disturbed if the children fight or curse in front of company. Her commands concerning these behaviors are abrupt, short, and without explanation. As with most all of her commanding, she enters into the situation too late. At this point there is not much chance of stopping a particular behavior even if she had the ability to issue clear, unambiguous instructions. A knowledge of when to intervene and how to structure a situation so problems will be prevented is lacking. Instead, Nancy's typical style is to move along, taking each situation in stride without much use of foresight or planning.

Nancy maintains contact with the local Salvation Army. She goes to church through this organization and both she and the children participate in activities sponsored by them. Nancy talks about a couple of friends she had made through the Salvation Army, but as with all her friendships, she seems to regard them as temporary. She makes friends easily, but does not seem to become emotionally invested. This has been illustrated by the way

Nancy talks about her friends moving away or herself moving away from them. More than likely, this is most adaptive for her considering the many times she has changed residence. Additionally, the status of Nancy's friendships seem to change abruptly. Sometimes this appears to be the result of the action of Nancy's children rather than Nancy herself. Nancy becomes puzzled and confused in this area of social relationships. This inability to understand how one individual's actions affect the people around them parallels Nancy's failure to perceive how her behavior influences her children's behavior.

Perhaps one of the more intriguing aspects of Nancy's behavior is the ease with which she joins right in with the younger children, almost becoming one of them. In fact, sometimes her actions (such as play-fighting or high intensity game-playing) seem more sisterly than motherly. Often she will laugh childishly or display child-like excitement over something. She has a characteristic grin that is accompanied by crinkling up her nose. She enjoys playing games and always puts forth a great deal of effort. She also tries hard when we ask her to do other tasks such as filling out survey forms. She tries to follow directions and wants to do a good job. She rarely complains. Because of these traits, she has been fairly easy and pleasant to work with despite her lack of even a basic understanding of social learning skills, her slow rate of grasping new concepts and making the transition from talking about something to actually doing it.

6.6.3. Charlene. - Charlene is much less appealing. She is of short stature, has a rectangular build and is significantly overweight. Her hair is wavy and kept rather haphazardly. The glasses she wears make her eyes look even bigger than they are but at the same time hide their prettiness. Often her clothes appear more matronly than those characteristic of most adolescents her age.

Charlene's bossy demeanor and stubborn nature work together to detract from her appearance further. She is quick to demand and seems to feel that she must have a hand in everything. Though she is the boys' sister, her behavior is much more parental, she commands the boys often and attempts to discipline them regularly. This is done is a very harsh, negative tone of voice and is often accompanied by some sort of negative physical action (hit, grab, pinch, slap, squeeze, etc.). When Charlene is home, a much higher rate of negative interaction is apparent in the family. She provokes Nancy and all three boys, many times starting negative exchanges. Her strength is surprising and she does not hesitate to use it. Even Allen who is almost as big as Charlene does not use his strength against hers.

Positive acts are a part of Charlene's behavior repertoire, however. Occasionally, she will show physical affection to Michael by hugging or kissing him. Sometimes she commands him to approach her first, then, if he obeys, she responds warmly. If not, she responds quite negatively. At other times, Charlene will help out one of the other boys but will do a good deal of commanding in the process. She does seem to care for the boys, but her negative emotions surface much more often than positive ones.

Probably the most intriguing aspect of Charlene's behavior is the abrupt and rapid changes in emotional affect. Within seconds, an interaction initiated by her can change from positive to a combination positive and negative, to negative and back to positive. She may start off by verbalizing her intention to hug Michael then grab him to draw him near. The hug quickly turns into a squeeze from which Michael tries to withdraw. At this point, a vindicative response is verbalized by Charlene and she hits Michael When he begins to cry, she tries to comfort him.

In addition to these abrupt changes in affect and behavior, Charlene seems to misperceive the actions of other family members frequently. Many times that which appears to be typical brotherly behavior (such as the boys roughhousing with each other or throwing a ball a little harder than necessary) is responded to by an overreaction on Charlene's part. She seems to take it upon herself to discipline them even when it is not needed. It appears that she has unrealistic expectations for her brothers often expecting them to be perfectly behaved (according to her rules) and respond to her commands immediately. This self-centeredness is apparent in Charlene's other actions. It seems that her feelings for people and how she reacts to them are directly related to what the person can do for her. For instance, one week, Gary was "a good kid in need of her protection" because he would sit next to her on the school bus when no one else would. Coupled with this desire for the boys to satisfy her needs, Charlene also seemingly misperceives some actions to be against her when they are not meant to be. In these cases, she again overreacts often criticizing and then withdrawing.

Charlene strongly believes that what she does in terms of correcting her brothers' behavior is in the boys' best interest. To an observer, however, it appears that she is very concerned about herself and what is in store for her. A particularly salient concern of hers is that she may be placed in an institution for the mentally retarded. She has said that she would commit suicide before she would allow this to happen. Coinciding with this concern is her fear that she will be labeled mentally retarded. She is presently in a special education class at the local high school.

Though she started out having trouble with only her home economics teacher, problems with school have escalated and she is now having problems with her other teachers as well.

Charlene talks about school both positively and negatively depending upon the case she wants to present for herself. Sometimes she talks as if she is going to try hard to do well and graduate. As of late, however, her negative comments have increased in frequency. Most often she says she is going to get out of school as quickly as possible. Additionally, she uses the threat that she is purposefully going to fail her classes to arouse attention and sympathy.

As a result of her fear of being institutionalized, Charlene worries about the repercussions of some of her negative actions. A description of a recent incident will serve to illustrate this: While Charlene and Gary were fighting not long ago, Charlene threw Gary into the coffee table. Gary's ear hit the corner of the table. An extremely sensitive contusion on the inside of his ear resulted. When we arrived for our usual visit the next day, Gary showed it to each of us as soon as we sat down. Though Charlene was trying to remain calm, she seemed quite nervous about Gary's display. In fact, she took Gary to her side and told him to be sure not to show it to the school nurse. She also instructed him to tell the nurse he merely fell and bumped it should the nurse see the contusion. Her comment was that if the nurse did see it, she would "write a book" on it and cause trouble for everyone. Later that evening when we had a chance to speak with Charlene alone, she told us of another incident where she had thrown a knife at the boys. As a result she had to go to the mental health center. Though she said she was worried about Gary and wanted to say she was sorry, it was clear that her biggest concern was for herself and what would happen to her.

Though Charlene is often quite belligerent and negative, she also displays quiet and shy behaviors at times. She will talk softly while looking down and fumbling with her fingers. Sometimes she will withdraw, becoming sullen and acting as if her feelings are hurt. She seems to manipulate the emotions she displays carefully, depending upon the reaction she wants to arouse. Though she is a skillful manipulator, Charlene lacks many positive social skills. This became particularly apparent when she took a live-in babysitting job. She had been complaining that she hated living at home and hated the neighbors (she later joined allegiance with them much to Nancy's frustration). She spoke of a car and a job as her keys to independence and freedom from her family. At the outset, Charlene seemed very pleased with her job. As days passed, however, things began to go askew. Apparently, there were many misunderstandings of what Charlene's duties included. Additionally, according to Charlene her employer made unreasonable demands and involved herself in too many of Charlene's personal affairs. (This is not to say that this was uncalled for on the part of the employer. Apparently Charlene behaved irresponsibly at times. For example. she made a large order for Avon cosmetics that she could not afford.)

As the relationship between Charlene and her employer worsened, Charlene began to complain of "migraine" headaches. We came to find out that "Migraine" headaches and asthma attacks seemed to come to Charlene at times of stress or when she wanted to extricate herself from a situation (such as a beating from her father). When Charlene's employer took it upon herself to make doctor's appointments for Charlene without either Nancy or Charlene's consent, many upset feelings erupted. Charlene became very distressed. Yet, through the entire situation, she was unable to take even the first step toward improving the situation. Nancy also had no idea how to intervene even though she too became angry at how the situation was progressing. Both Cnarlene and Nancy seemed afraid to take action and unaware of what was appropriate for their roles. Charlene also had trouble delineating what aspects of the situation were upsetting her and what her true feelings were. She was afraid to approach her employer and totally unaware of how to change the situation. Unable to solve any of the problems associated with the job, Charlene simply stopped going to her employer's home to babysit after school.

Her employer found a new babysitter and Charlene had no further dealings with her.

Part of Charlene's rationale for leaving her job was her family. She said she missed the boys and felt obligated to help them grow up "right". Despite her many negative actions, it is clear that Charlene does have a sense of family. She is convinced that if her family would follow her wishes and directions, everything would work out smoothly and the fighting would stop. She apparently has no perception that it is actually herself that instigates most of the family conflict and aggression.

6.6.4 Gary. Gary, Charlene's full sibling, has a certain appealing charm. Though he is of short stature for his age, he is of average build. He has dark brown straight hair and large brown eyes. He resembles his sister in some of his facial features, but with a more attractive overall appearance. Gary wears glasses, partly to help correct his lazy eye which does not respond muscularly. His clothes are typical for a boy his age from a low-income home - a bit outdated fashionwise, rather worn and sometimes ill-fitting. Though these characteristics of his clothes do not enhance his appearance, they also do not detract from it.

It is Gary's personable nature that is the most significant contributor to his appeal. He can be quite thoughtful and mannerly. For instance, sometimes he will give us all candy before we leave. For Valentine's Day he gave us cards. He is capable of using manners and polite expressions such as "be careful driving home" and "excuse me, I didn't mean that." At times he is cheerful and obedient almost in a military fashion. He has an appealing "little man" sort of stance with his hands in his pockets.

But this description is a one-sided account and does not provide an accurate total picture of Gary. He can be both unresponsive and very exciteable. He responds well to positive reinforcement but requires quite a bit of it to make an impact. While he is compliant sometimes, he can also be very stubborn and unwilling. Frequently he did not participate in the planned tasks but rather used the time to provoke others, particularly Michael into a negative exchange. He will delay compliance (particularly to his mother's commands) or simply refuse. He requires a great deal of positive reinforcement and coaching to do certain constructive acts. As this is a weak area for Nancy. Gary seems to have settled for negative forms of attention from his mother. He is quite competent at securing this type of attention for himself. When Nancy threatens or warns Gary, his typical response at these times is "I don't care."

Often Gary's interactions will involve "play" fighting and negative physical contact such as hitting, squeezing, poking and hair pulling. His pattern of interaction with Michael is most intriguing. Though he can be affectionate and positive toward Michael many times these positive initiations turn mixed in affect involving sarcasm and incongruency between verbalizations and actions, and then negative. The negative behavior (destructive, aggressive and/or mean actions and verbalizations) may again be followed by more positive helping behaviors. These significant changes in affect are quite sudden and abrupt. It is not unusual for three changes in affect to occur in less than two minutes. This quality of Gary's behavior is very similar to that of Hannahmae's only not quite so extreme.

These negative interactions seem to involve more than simply getting attention from Nancy. As illustrated by some of his actions, Gary appears to have a large number of aggressive behaviors in his repertoire. It is unclear as to what the significant antecedents of this aggression are, but the consequences are apparent in his interactions with family members and pets. Sometimes Gary seems to delight in hurting or tormenting particularly Michael and the puppy, Bumpsie. He will hit and yank on Michael provoking him to respond negatively in return. His interactions with the puppy are distressing to watch at times. He will pull on his legs and neck contorting the puppy into all sorts of odd positions. He seems to be trying to get the puppy to bite him.

When Gary is not provoking others or behaving appropriately, he often seems rigid and preoccupied. He also displays some self-stimulating behaviors such as biting his hand and flipping his eyelids over with his fingers. He tends to engage in these behaviors when other family members are occupied and task oriented or when he is excited. He is the least task oriented member of the family and is distracted easily. He is also easily discouraged and has a tendency to give up. This seems to be related to his need for heavy doses of positive reinforcement in order to accomplish certain constructive tasks such as cooperative play, building an object, or doing homework.

Though Gary does have a large repertoire of behaviors, many of them are diametrically opposed to one another in their affect and consequences. His behavior can range from the mannerly young gentlemen telling us to have a good trip home to the aggressive brother starting a fight for no apparent reason. Unfortunately, those behaviors of negative affect and consequences seem to have a greater payoff for him in terms of stimulation from others. This is frustrating to observe since he appears to have great potential to develop more positive behaviors in light of his basically personable and congenial nature.

### 6.6.5 Allen.

Allen, one of the two children from the union of George and Nancy is quite different from Joey both in behavior and appearance. He has blond hair and blue eyes and has a much more masculine appearance than Gary Although Allen is three months younger than Gary he is significantly taller and broader. As a result, he appears to be older than Gary Whereas Charlene and Gary resemble one another in facial features and coloring, Allen and Michael resemble one another particularly in their light coloring. Allen, however, looks the most like his mother.

Allen's clothes are similar to those of Gary. The few times we have seen him "dressed up" he has looked even more attractive. He is very humble about this, though, and has more of a tendency to belittle his appearance than to brag about it. Like Joey, he has glasses to correct his vision, but also similar to Gary often does not wear them when he is supposed to.

Allen's behavior is very typical for a boy his age. He is interested in what we bring for him to do and almost always participates fully. He works hard and can be quite task oriented. He is fairly patient and tries hard to accomplish certain tasks. If he fails, however, he often becomes very upset with himself and reacts by crying and withdrawing. This reaction is awkward to watch, particularly because it is generally not expected from a person his size, but also because it does not seem to fit with the rest of his personality.

On the whole, Allen is very cooperative. He always listens to and obeys our requests. He is also helpful and easy to get along with. Often he carries materials to and from the car for us. In addition, he cleans up carefully and is eager to please us with his accomplishments. He responds quickly to social reinforcement and does not require coaxing. He is the most compliant of all the children and by far the least negative. Through over half of our contacts with the family, even if a family member attempted to initiate a negative interaction with him, he would not respond negatively. Additionally, the negative behavior he used to emit seemed to be less provoked by a desire to hurt a person. Now, Allen will respond angrily with physical aggression if he is driven far enough. He is still much less likely to provoke negative interchanges however.

Allen does enjoy roughhousing and can be physical with his siblings and mother. He will kid around and sometimes gives Nancy a hard time, but never in a malicious way. He is almost like buddies with his mother and interacts with her more physically and verbally than anyone else. In fact, though he and Joey are closest in age, they interact the least with one another. Sometimes they seem to avoid each other. Other times there is a competitive clash. In these cases, Allen will use his superior strength against Gary sometimes dominating him. Gary dislikes this intensely and responds by picking on Michael or the pet dog.

In light of his high rate of compliance, his easy-going and eager-to-please nature, his helpfulness, cooperativeness and lower rate of negatives, Allen is the most different of all the children. He does not quite fit in with the pattern of interaction typical of the rest of the family.

6.6.6 Michael. Michael, Allen's full sibling, is also a very attractive child. His blond hair and blue eyes frame his small face. He has a charming smile which adds to his attractiveness. He is average weight and build for a four-year-old boy. Like his brothers, his clothes are often ill-fitting. Many times they are dirty due to the rural setting of the house. His face is often dirty as well.

Michael's abilities are fairly typical for a child his age. He enjoys our coming and is always at the door to greet us. Sometimes he comes out to help us carry materials inside. Other times, a bit of shyness seems to overpower him. He excitedly attempts to participate in all the games but occasionally has trouble understanding what he is supposed to do or lacks the skill to do it. At these times he will often whine. The other boys, particularly Gary have very little patience with this behavior and complain about it to both Michael and Nancy. Sometimes they (particularlyGary) will be physically aggressive toward Michael. When this happens, Michael whines and cries and does not react physically for a short period of time. Then, in a few moments, he tries to push away. Lately, however, he has lashed back at Gary's tormenting by clenching his teeth and socking Gary back several times in succession. This type of interaction is not uncommon. It happens quickly in a patterned way, breaks up, and reccurs later.

Nancy's reaction is inconsistent and often ineffective. At times she will intervene on Michael behalf and physically remove or restrain Gary. More often she will yell in a loud voice, "Cool it, you two" or "Stop it, Gary. This does not get much of a result and young Michael ends up receiving a large amount of negative verbalizations and physical assaults often in a tormenting way. He is beginning to react to this, however, not only by returning punches but by initiating aggressive actions on his own.

Without provocation he will jump on Gary or occasionally pinch, or hit Allen. These behaviors are very similar to Gary's instigations of negative interactions. Michael appears to be imitating them closely and in turn using them back on Gary. Thus, instead of avoiding one another, Gary and Michael feed on one another for some sort of stimulation. This interaction is intriguing to observe, for even though there is opportunity for more positive interaction with other family members, Gary and Michael seem oblivious to it and instead opt for negative interactions between themselves. Unfortunately, even when Michael initiates interactions appropriately, he often receives negative physical actions from both Gary and Charlene.

Michael has also begun modeling Charlene's negative and aggressive verbalizations. It is startling to hear him say, totally out of context, "If you knock this down, you're going to get your head shoved against the wall", or "stay away from me, you retard". Again, this will happen without provocation. Rather, it seems that he is responding like Charlene would if she were engaged in what he is presently doing. Unfortunately, Nancy seems to have no response to these new aggressive and destructive behaviors Michael is acquiring. It is frustrating to watch this type of socialization taking place, knowing Michael would be a different child were he in a different environment.

Sporadically, Nancy will help Michael accomplish a task. She has the most patience with him and does not have unreasonable expectations. She will intervene physically to help him do something, trying to teach him the appropriate behavior. Unfortunately, her directions and explanations are not very clear and as a result Phillip must try to learn from watching. His interest in learning is apparent, though, and he is ripe for educational intervention. Though he is of nursery school age, the local Headstart is overcrowded and cannot accept him. Thus, Michael will probably be without educational intervention until he starts kindergarten. As Nancy does not seem to have the skill or knowledge to be a good teacher for her children, this is particularly disappointing.

Michael is the most quiet of all the children. This is partly due to his age but in addition he tends to communicate on a more physical than verbal level. He is more inclined simply to do something than to talk about it before, after, or while he is doing it. Sometimes he proudly shows Nancy what he has done but received practically no reinforcement or encouragement. Or, he will excitedly point out an accomplished fact only to get ignored or laughed at. Thus, he remains fairly nonverbal other than to request something he wants. When he does get excited, at times he will behave in a silly way to try getting attention. This may involve running around in circles or wiggling his body back and forth with a funny face. Unfortunately, it is this type of behavior or the whining and negative behaviors that draw the most attention for Phillip rather than positive or constructive behaviors. He is quickly learning how best to survive in his family.

## 6.7 The E. Family: The Development of a Model for Intervention.

It is a central feature of a social interactional approach that an accurate understanding of the causes of child abuse and neglect as well as their successful treatment and prevention require an examination of abuse and neglect within a social matrix. A central thesis of PROJECT INTERACT has been that the matrix consists largely of the recurring transactions that take place between various members of the family. It is certainly true that abuse and neglect occur within a broader historical and cultural context tolerant of such behavior, but these dysfunctional patterns are more immediately traceable to contingency histories within the family itself.

While there does seem to be growing awareness of the importance of interpersonal dynamics for the understanding of abuse and neglect, the fact remains that the majority of the research and intervention efforts has emphasized what people say about themselves rather than what they do. As I indicated earlier in this report, much of this research has relied upon second-hand information, clinical assessments, rating scales, survey questionnaires and subjective accounts. Undoubtedly, these indirect assessment procedures have their place but, by themselves, they may not be capable of providing the kinds of unbiased, highly detailed accounts of behavior that are necessary for the design of effective treatment programs and for the evaluation of those programs (Jones et. al., 1975). For these reasons, there has been a need to restore some balance to research efforts by encouraging studies that employ direct observations of behavior and which make those observations in ecologically valid settings at the time those behaviors occur rather than retrospectively.

Another problem that I mentioned earlier is the tendency to focus upon high intensity physical abuse, thereby, ignoring more subtle yet also more frequent psychological abuse. This has produced a number of concomitant problems including the assumption that the locus of a family's problem is to be found in the person of the official perpetrator of the abusive incident. Were s/he to leave the home or were there to be no further official citations of abuse, the researcher or clinician may conclude that the family's problems are alleviated and that family would be placed among the ranks of successful treatment families. In point of fact, the children in that home may be at risk as much as before given the continuation of patterns of negative, coercive verbal interaction. Indeed, it is quite possible that the official perpetrator of abuse may not be the most destructive member of the family. It is even possible that his or her periodic physical aggression is prompted by the high frequency verbal aggression of another family member. It is for reasons such as this that PROJECT INTERACT has focused upon verbal as well as physical contacts among all family members. It is also for such reasons that the E. family was selected as a case study family.

Still another problem with much of the intervention research on child abuse and neglect has centered around the failure to assess carefully the components of the various procedures used. This especially applies to large-scale demonstration studies. Indeed, the larger the scale, the more difficult this problem becomes. While the "shotgun" approach may be defensible at an early stage of research, we eventually must determine the necessary and sufficient procedures for effecting behavior change.

Component analyses require not only precise specification of procedures and behavioral events but, to be effective, they require carefully-designed longitudinal studies to assess the effectiveness of the procedures over time. Recent developments in sequential-longitudinal strategies (Nesselroade and Baltes, 1974) make this strategy even more possible. In any event, we would probably be much better off, over the long run, by designing a large number of fairly small studies than a small number of gigantic studies (Campbell and Stanley, 1966; Scott and Wertheimer, 1962).

There are some promising efforts being made in these directions. For example, Patterson (1976) and his associates have been investigating the extent to which social learning principles can be utilized to teach and maintain non-coercive interactions among family members. Reid and Taplin (1977) have applied Patterson's model to the treatment of abusive families.

Their program has the following five components. One, all family members are systematically observed in the home at several stages, including a baseline period, at specific points during intervention, at the conclusion of treatment, and at several points during a 12 month follow-up period. Two, using a variety of educational materials, including programmed texts on child management, films, and video tapes, discussion between parents and therapists and the modeling of treatment techniques, the parents are instructed in social learning theory and its application to child management. Three, the parents are taught to pinpoint, observe and record specific behaviors of their children. Four, parents and children are involved in negotiation sessions which result in the development of family programs designed to alter the reinforcement and punishment contingencies operating in the family. Five, the parents are taught to use positive reinforcing consequences for appropriate child behavior and time-out procedures for inappropriate behavior.

Their preliminary outcome data "suggest that intensive training in parenting skills can be highly effective in reducing the level of parent-child conflict in abusive homes." (p. 19) They caution, however, that their therapeutic strategy must be expanded such that aggressive behaviors by parents are pinpointed for specific intervention. They also recommend that longitudinal follow-up studies of these families be implemented.

A similar program has been described by Christophersen et al, (1976). Using a two-therapist team approach in the home, the parents are trained to give frequent amounts of attention and love and praise throughout the day whenever the child is behaving appropriately. The parents are also taught to establish reasonable rules and to apply them consistently. They are encouraged to spend time teaching and having their children practice new appropriate behaviors. They are taught to avoid hugging, picking up or physically loving the child when he misbehaves. While the parents are encouraged to be as pleasant and calm as possible, they are also instructed in the use of time-out for the child's inappropriate behaviors. Regrettably, this program has been in effect for only a short time, thus it is not possible as yet to report on its effectiveness. A third program based on similar procedures has been described by Jensen (1976). Unfortunately, it, too, is of such recent origin that no published accounts of its effectiveness are available.

PROJECT INTERACT has taken the following approach to the issue of treatment and prevention. The program has had two basic phases. The first phase was designed to collect extensive detailed observational data on the patterns of interaction in a number of abusive, neglectful and matched control families. Over 100 families have been systematically observed. The major findings from these observations have been described in this report. This particular phase required more than two years.

The second phase was designed to develop, implement, and evaluate an intervention program based on the observational findings collected during the first two years. Using a single-subject design (Burgess and Bushell, 1969, ch. 7), this phase investigated the procedures and techniques described below.

6.7.1. General Procedure. The observations occurred twice a week (unless cancelled due to illness or vacation) and were held in the home, generally in the livingroom, at a time when all five family members could be present. During the school year, the observations usually began at about 6 p.m. and during the summer vacation about 2 p.m. All family members were asked to participate; however, on occasion, one or more of the three older children were not included in the observations due to being out of town or refusing to participate. Those family members present were asked to remain in one room throughout the observations and to leave the television off for that period.

The length of the observation period was determined by the number of family members present, with eight minutes of observation per family member during each session. Thus, the total duration of observation ranged from 16 minutes when only two family members were present to 40 minutes when all five participated.

After each session, the mother received $5.00 to encourage the family's continued participation in the intervention program. Initially, this money was given contingent on the completion of each observation session. Later, as the mother was asked to practice new skills (e.g., observing and recording behaviors) during the sessions, the contingency was altered to include the performance of those skills.

6.7.2. Baseline (Tasks 1-12) During each baseline session, the observers instructed the family members to engage in two specific tasks. These tasks were designed to promote interactions among all the family members. They included two types of activities, skill tasks (e.g., ring toss, basketball, and Toss Across) and construction tasks (e.g., blocks, Lego, Lincoln Logs, and Tinker Toys). One skill and one construction task were included during each session. The family was observed four minutes per family member during one task, followed by four minutes of observations per family member on the second task.

During this condition the observers refrained from giving any feedback to either the mother or the children concerning their behavior. However, after observations were completed for each session, the observers did provide time to listen to the mother's and children's (primarily the daughter's) reports of current events and problems pertaining to the family.

6.7.3. Concept Training (Tasks 13-30) The purpose of this condition was to introduce the concepts and terminology of the social learning approach to parenting skills to the mother. The observation periods continued to be conducted as they had been during baseline, and the observers continued to refrain from giving any direct feedback concerning the behavior of any family member. The components of concept training included the following activities for the mother: 1) reading a parent training manual; 2) listening to tapes based on that manual; 3) doing homework; and 4) discussing the concepts with the observers after the observation for each session was concluded.

The manual, Behavior Problems by Baker, Brightman, Heifetz, and Murphy (1976), covered topics such as identifying behavior, its antecedents, and its consequences, specifying and measuring the behavior, and various procedures to change behavior. The mother was asked to read a certain section of this manual, generally three to four pages, for each session.

Because the mother had demonstrated a fairly low level of reading ability, tapes were made to supplement the reading material. Generally, the tapes, lasting approximately one half hour each, covered the same material assigned in the manual. In addition, the narrator on the tapes explained difficult words from the text (e.g., "antecedent") and provided examples pertaining to the concept being trained from the mother's own experiences with her children. The tapes were given one at a time to the mother to listen to at least once, but as many times as she liked, between sessions.

To enhance the mother's acquisition of the behavioral concepts further, she was asked to do a homework exercise between sessions. Some of the exercises were described in the manual. Additional homework, constructed by the observers, included fill-in-the-blank statements covering the concepts and requests for her to apply those concepts to her own family by listing examples of problem behaviors, possible antecedents, rewarding consequences, etc.

During the discussion with the mother following the observation period, the homework from the previous sessions was reviewed and corrected if necessary. Then the observers introduced the new material by briefly going over the next assignment in the manual. Each new concept was introduced and discussed with the mother. She then received the supplemental tape and the homework assignment for the following session.

6.7.4. Recording Training (Tasks 31-36) The goal of this condition was to give the mother some experience in observing, recording, and graphing her children's behavior. To facilitate her acquisition of these skills, the mother was trained to observe during the regular observation periods of each session so that an observer could give her immediate feedback. The mother also was asked to practice these skills on her own between sessions.

Because she had reported that the children frequently did not comply when she asked them to do something and that this problem was something she would like to change, she began by recording an "obey" or "disobey" each time she asked one of the children to do something. A counter with four push buttons, such as those used by grocery shoppers to record their expenditures, was strapped to the mother's wrist. She recorded obeys on two of the buttons and disobeys on the other two without making any distinction as to which of the children obeyed or disobeyed. During each task, an observer also recorded obeys and disobeys on an identical wrist counter. After noting an obey or disobey, the observer would wait a few seconds to see whether or not the mother recorded that behavior. If she did, the observer gave her positive feedback verbally or nonverbally (e.g., "Great!" and/or a pat on the back) as unobtrusively as possible so that the ongoing interactions would not be disrupted. If the mother did not record the behavior, the observer prompted her to do so by repeating the mother's request and stating the resultant child behavior (e.g., "You asked Tim to hand you that block, and he did. So that's an obey.")

At the end of each task, both the mother and observer recorded the number of obeys and disobeys on separate data sheets. After comparing the two records the observer praised the mother for her good work. The mother then entered these data on a graph showing the total number of obeys and disobeys that occurred during each task and was given feedback on her graphing by the observer.

The mother repeated the sequence of observing, recording, and graphing twice during each visit by the observers to the home. In addition, she was asked to repeat this sequence on her own each day of the week. The procedure for these independent practice sessions was for the mother to begin recording obeys and disobeys after the children came home from school and to continue recording for at least one half hour whenever possible. After the recording period had ended she was asked to transfer the data to a data sheet and to graph the data. The observers gave the mother feedback on her records of these practice recording sessions at the end of the next observation session.

Money was used as an additional incentive for practicing the recording skills during the regular observation sessions and to maintain the practice recording sessions when the observers were not there to prompt her to give her feedback. In addition to the $5.00 she regularly received at the end of each session, the mother was given $1.00 for practicing during each regular session, and $1.00 for each day on which she completed the recording sequence (recording and graphing) on her own.

6.7.5. Contingency Training I (Tasks 37-46) The goals of this condition were to teach the mother how to apply contingencies to increase her childrens' appropriate behavior and to decrease their inappropriate behavior. Since she had been recording compliance and noncompliance, compliance was chosen as the appropriate behavior to increase. Intense physical fighting among the children, which had occurred at various times from the first observation sessions, had escalated to the point that physical injury to one or more of the children seemed highly possible if not probable. The mother's lack of control during the childrens' fights was of extreme concern to her and to the observers. Thus, fighting and the behaviors leading to fighting (e.g., poking, pinching, and pushing) were targeted as the inappropriate behaviors to decrease.

The positive reinforcement system implemented to increase compliance included both intangible and tangible consequences. The mother was instructed to give each child a minimum of three commands during each task. If the child complied, she was to praise the child immediately including a description of the compliant behavior (e.g., "Thanks, Gary for handing me the block" or "Allen you certainly did a good job of helping Gary build that tower"). If the child complied with all three requests from the mother during a task, he or she received a small bag containing a mixture of candies, nuts, and raisins. This tangible consequence was designed to encourage consistant compliance by the children.

A second more intermittent consequence consisted of a drawing for 50¢ which was held three times a week (Tuesday, Thursday, and Sunday evenings). Each time a child complied with one of the three requests given by the mother during a task, the child increased his or her chances to win the drawing. The procedures for this drawing are described below.

During this condition, the mother used a new recording system designed to help her keep a record of how many commands she gave to each child and how many times each child complied. The mother wore an apron with two pockets. At the beginning of each task, she placed three colored discs labeled with the child's name for each child in the right-hand pocket. Each time she gave a command to a particular child, she removed a disc for that child from the right pocket. If the child complied, she placed the disc in a glass jar; if the child did not, she placed the disc in the left-hand pocket of the apron. Using this system the mother was able to record whether or not each child had received at least three commands and whether or not each child had complied with those commands. Discs placed in the glass jar after a child's compliance remained there until the next drawing at that time one disc was drawn by the mother or an observer. The child whose name was on the disc received the 50¢ prize, and all remaining discs were removed. The children began earning chances for the next drawing during the following task.

The tangible rewards used during this condition were selected after a discussion with the mother. She indicated that these were rewards that all four children would most likely enjoy and that she would be able to supply. The observers had previously noted that candy and money were regularly given to the children on an apparently noncontingent basis. During the first two sessions, the observers supplied the small bags of candies and the money; however, during the remaining sessions of this condition the mother was responsible for their supply.

Time-out was the consequence chosen for the inappropriate fighting behaviors. Each time a child initiated a fight with a behavior such as poking, pinching, or kicking another child, even if apparently only "play-fighting," the mother was asked to give a warning immediately. The warning included a description of the inappropriate behavior and a statement that the next time that behavior occurred the perpetrator would go to time-out for five minutes (e.g. "Allen you just twisted Gary's arm. If you do that again you will have to go to time-out on the stairs for five minutes.") If the behavior occurred again the mother was to instruct the child (or children) to go to time-out, physically prompting the child to go if necessary.

Several training strategies were included to help the mother implement the contingencies described above. Short modeling sessions (approximately three to five minutes each) were held at the beginning of observation sessions (Sessions 27-30, Tasks 37-44) to introduce the new contingencies to the mother and children and to give them an opportunity to practice. To involve the family in the new system, gradually, the modeling sessions included a variety of combinations of actors: 1) observer as mother with observers as children; 2) observer as mother with actual children; and 3) actual mother with observers as children. Each modeling session was set up to include examples of consequating compliance with praise and tangible rewards and fighting with time-out.

Training during the tasks of this condition was similar to that of the previous condition. An observer gave the mother positive feedback when she remembered to praise compliance and to use time-out for fighting. When the mother neglected to consequate these behaviors, the observer prompted her to do so. The mother continued to record "obeys" and "disobeys" on a data sheet and graphed those behaviors at the end of each task.

In addition, the mother was asked to hold similar sessions with her children each day independently. These independent sessions differed from the regular observation session in that she was asked to give each child five commands instead of three; however the mother was instructed to consequate, record, and graph behaviors just as she did during the regular observation sessions.

During this condition the monetary consequence for the mother included $5.00 after each observation session, $1.00 per task for practicing new skills, and $1.00 for conducting each independent session, including recording and graphing the stipulated behaviors.

6.7.6 Maintenance Probe I (Tasks 47-56.) The purpose of this condition was to assess the degree to which the mother would maintain the contingency system trained in the previous condition. The observers simply told the mother to continue using the procedures she had learned, but did not give her any direct feedback concerning her behavior during the regular observation sessions or concerning her records of the independent sessions. The mother continued to receive $5.00 per regular session, $1.00 per task during each regular session, and $1 per independent session. This money was not contingent on the performance of specified behaviors during those sessions.

6.7.7 Contingency Training II (Tasks 57-60.) This condition was similar to the Contingency Training I in that the goal was to reinstate the mother's use of praise and time-out; however, a number of changes in procedure were made. These changes included modifications of the general format and the training procedures and the elimination of the monetary incentives.

A change in the general format was prompted by the frequent comments by various family members indicating that they would like to do something other than the planned tasks during the observation periods. After their frequent exposure to the tasks provided by the observers, they wanted to try some new activities. Consequently, the observers announced before Task 57 that although the family could play with the material provided by the observers if they wished, they could also engage in tasks of their own choosing so long as they remained in the living room.

The training procedure was modified as a result of problems which arose during Contingency Training I and the Maintenance Probe. During those conditions it became increasingly apparent that the mother was simply going through the motions of giving commands, praising compliance, and recording "obeys" and "disobeys". Her commands became more and more artificial, and she became so involved in transfering discs that she sometimes failed to see compliant behavior. She had also indicated that she did not like using the apron.

As a result of these developments, the training procedure during the observation sessions was simplified. The mother was asked to concentrate on praising the children when they did something she had requested or something she liked. She was also instructed to consequate fighting with time-out. She was no longer required to give a certain number of commands to each child and did not record "obeys" and "disobeys". However, as in Contingency Training I, an observer gave the mother feedback on her delivery of praise and time-out consequences half way through and at the end of each task period. As in the earlier conditions, the observer gave both verbal and nonverbal feedback (e.g., " Great!" accompanied by a smile and silent hand claps.) She was encouraged to find as many behaviors to praise as possible.

Although not directly requested to do so, the mother continued to give commands, count "obeys" and "disobeys", and record those behaviors during independent sessions in this condition. However, the mother received no payment for continuing these sessions.

Payment in general was discontinued due to complications with the welfare office. After discussing the situation with the mother, it was decided that the training sessions would continue in spite of the fact that she could not be monetarily rewarded for her participation.

6.7.8. Maintenance Probe (Tasks 61-64) As in the earlier probe, this condition was designed to assess the mother's maintenance of the use of praise for appropriate behaviors and time-out for fighting at the beginning of each task; the mother was simply told to continue trying to use the skills she had been taught.

6.7.9. Results. The data are summarized in Tables 19 and 20 and Figures 5 and 6. The data in the tables were collected using either BOSS or Data Myte equipment. The data in the figures were collected with a paper and pencil, 10-second interval scoring system. The details of this system are included in the Appendix. The same focal subject sampling procedures were used in each case.

Baseline. The pattern of interaction during this phase clearly describes a family with a low-rate of verbal interaction. The rate of verbal interaction for this family as a whole is 20 percent lower than the rates found for single parent control families. Most verbal interaction occurred between the children, indeed, their rates of interaction are actually over 60 percent higher than that found in control families.

The family's rate of positive interaction was also low. This was especially the case for the mother. Her rate was 25 percent lower than that found in control families. As for total verbal interaction, the greater part of the positive contacts occurred between the children. It should be noted that there was virtually no positive interaction between the mother and her step-daughter Charlene. These data can be seen in tables 19 and 20 (the mother is 01, the stepdaughter 03). The mother's frequency of praising the children (scored as personal positive) can be seen in Figure 5. The data are plotted in Figures 5 and 6 according to whether or not Charlene was present and/or participating in the observation tasks.

## TABLE 19

## MEAN RATE OF TOTAL VERBAL CONTACTS

| | Baseline 1 | Concept Training 2 | Recording Training 3 | Contingency Training I 4 | Maintenance Probe 5 | Contingency Training II 6 | Probe 7 |
|---|---|---|---|---|---|---|---|
| Total Family | 12.70 | 15.92 | 17.00 | 17.13 | 18.97 | 15.98 | 14.71 |
| Mother | 3.27 | 5.50 | 5.00 | 7.62 | 8.44 | 6.55 | 5.68 |
| Children | 9.43 | 10.42 | 12.00 | 9.51 | 10.53 | 9.43 | 9.03 |
| Mother to Child | 2.63 | 4.97 | 4.26 | 6.58 | 6.92 | 6.22 | 5.39 |
| Child to Mother | 2.15 | 3.93 | 4.01 | 4.51 | 6.06 | 5.68 | 4.49 |
| 01 to 03 | .34 | .24 | .80 | .47 | .48 | .00 | .00 |
| 03 to 01 | .53 | .29 | .64 | .59 | .38 | .00 | .00 |
| Child to Child | 5.52 | 4.15 | 6.31 | 2.66 | 2.38 | 3.16 | 3.71 |

The rates of negative interaction during the Baseline condition actually were not very high. In fact, their rates were considerably below what was found in the control families. An inspection of Table 20 and Figure 6 reveals that there was a gradual increase in the frequency of negative interaction over the first 46 tasks. It should also be noted, however, that the highest frequency of negative interaction occurred between Charlene (03) and Nancy (01).

Concept Training. During this condition there was a 20 percent increase in overall verbal interaction (Table 19). For positive interaction, there was a general decrease during this condition. Interestingly, there was an increase in negative interaction. This can be seen for the family as a whole in Table 20 and for the mother in Figure 6.

Recording Training. In terms of total verbal interactions, we see a continuation of the trend toward higher rates of verbal interaction. On the other hand, there was also a continuing decline of both positive and negative interaction. The sole exception to this is the increased frequency of the mother's negative and mixed-affect statements to the children. This pattern can be seen in Figure 6. This increase in the frequency of the mother's comments was only evident in the interval sampling data.

Contingency Training I. Overall verbal interaction remained relatively stable during training. The largest change was the mother's verbal contacts to the children. They increased 35 percent. At the same time, her verbalizations to Hannahmae decreased over 50 percentage points.

The most dramatic changes that occurred within the family during this phase was the increase in positive interactions. For the family as a whole, there was close to a three-fold increase in positive behavior over baseline. The mother's rate of positive gives to her children increased by a factor of five. This same pattern can be seen in the interval data in Figure 6. It

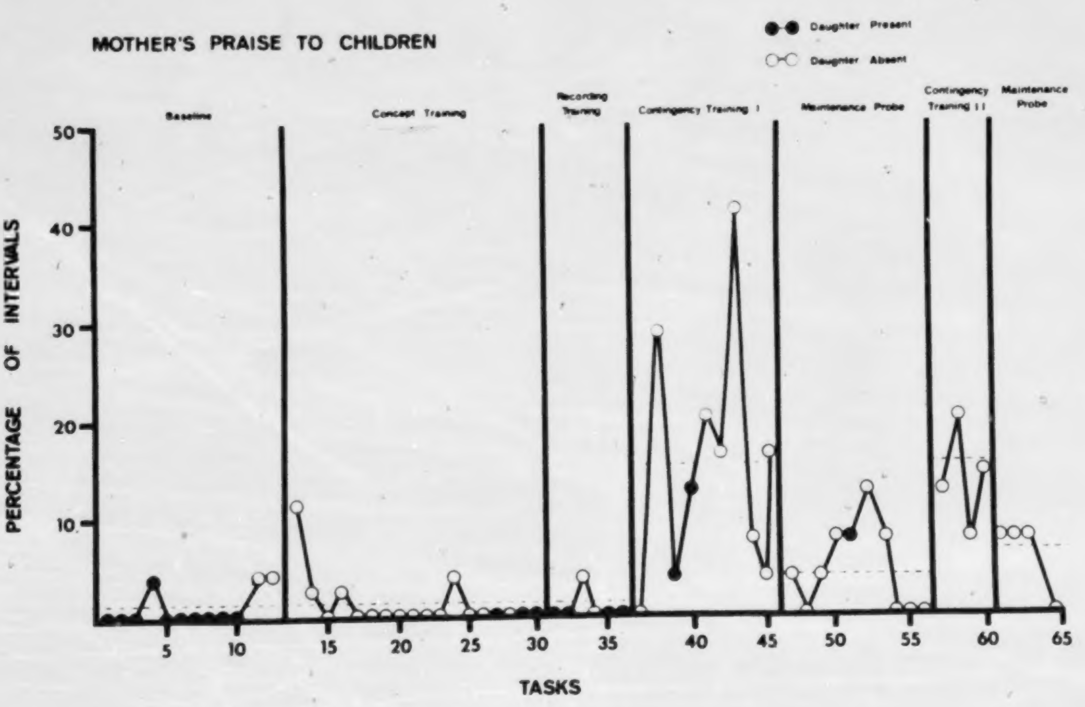


Figure 5

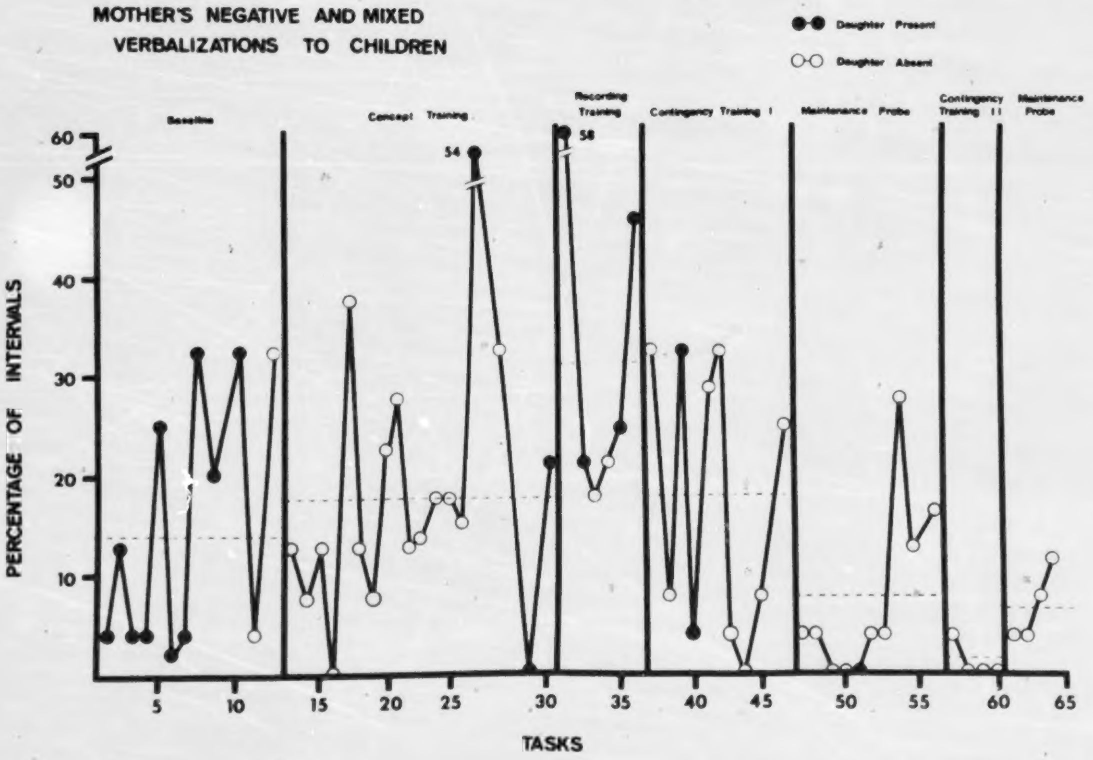


Figure 6

## EAN RATE OF POSITIVE VERBAL AND PHYSICAL BEHAVIOR

| | Baseline 1 | Concept Training 2 | Recording Training 3 | Contingency Training I 4 | Maintenance Probe 5 | Contingency Training II 6 | Probe 7 |
|---|---|---|---|---|---|---|---|
| Total Family | 1.21 | .64 | .22 | 3.03 | 2.09 | 2.00 | 1.53 |
| Mother | .25 | .19 | .05 | 1.43 | 1.23 | 1.58 | .92 |
| Children | .96 | .45 | .17 | 1.60 | .87 | .42 | .61 |
| Mother to Child | .25 | .19 | .05 | 1.40 | 1.06 | 1.58 | .92 |
| Child to Mother | .30 | .18 | .08 | .56 | .77 | .17 | .61 |
| 01 to 03 | .00 | .00 | .00 | .02 | .03 | .00 | .00 |
| 03 to 01 | .02 | .00 | .00 | .00 | .00 | .00 | .00 |
| Child to Child | .64 | .23 | .09 | 1.04 | .10 | .25 | .00 |

## MEAN RATE OF NEGATIVE VERBAL AND PHYSICAL BEHAVIOR

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Total Family | .44 | .60 | .15 | 1.09 | 1.16 | 1.13 | .37 |
| Mother | .06 | .10 | .05 | .18 | .29 | .46 | .24 |
| Children | .38 | .50 | .10 | .91 | .87 | .67 | .13 |
| Mother to Child | .04 | .06 | .05 | .11 | .21 | .29 | .24 |
| Child to Mother | .08 | .24 | .10 | .72 | .69 | .42 | .13 |
| 01 to 03 | .10 | .00 | .00 | .02 | .00 | .00 | .00 |
| 03 to 01 | .07 | .00 | .00 | .05 | .00 | .00 | .00 |
| Child to Child | .08 | .09 | .00 | .14 | .11 | .25 | .00 |

should be noted, however, that this increased frequency of positive mother-child contacts did not occur for the mother's behavior toward Hannahmae. Here the pattern remained unchanged.

So far as child to child positive interactions are concerned, they also increased substantially during this condition. Child to child positive contacts increased by 63 percent and child to mother positive contacts by 87 percent. This latter finding does not hold, however, for Charlene's contacts with her step-mother. Nonetheless, it is noteworthy that this substantial increase in the rate of the children's positive behaviors occurred without their being directly exposed to the training conditions. While the mother may have prompted some of these behaviors by her own positive responses to the children, the children also increased their positive behaviors towards one another. This may be a function of the children modeling their mother's behavior.

In a somewhat similar fashion, training had the effect of increasing the rate of negative interaction. This was especially the case for the children's contacts with their mother. In contrast, as can be seen from Figure 6, the mother's frequency of negative and mixed verbalizations to the children remained similar to that found during Baseline. It should be emphasized that these negative exchanges now occurred within a context of substantially more positive interaction.

Maintenance Probe. The most noteworthy effect of this condition is that the mother's rate of positive behavior, while decreasing somewhat, was at a rate four times that found during Baseline. The rate of child to child positive interaction declined, but the rate of child to mother interaction increased slightly.

Contingency Training II. The overall rate of family interaction did not change much during this condition. The most encouraging behavior pattern in this condition is that positive interaction remained high, chiefly due to the mother attaining her highest rate of positive verbal and physical behavior.

Simiarly, her frequency of praising the children reached the level found during the first contingency training phase. The rate of negative verbal and physical behaviors remained much the same (Table 20), while the mother's frequency of negative and mixed verbalizations dropped to its lowest level.

Maintenance Probe II. The overall rate of verbal contacts decreased during this condition. This decrease in rate appears to be due largely to a decrease of over 20 percent in the mother's rate of talking. There was also a substantial decrease (58 percent) in the mother's rate of positive verbal and physical behaviors. This was accompanied by an increase in her negative and mixed verbalizations to the children, though the mean was well below that found during Baseline.

6.7.10. Discussion. In brief, I feel that we made some progress in developing an effective intervention program. We found that we were especially able to increase the frequency of positive interaction. We are also quite aware that we have a long way to go. The advances we made were hard-earned, they came in very small steps and they were not sustained at levels we had hoped for during the Probe conditions. Nonetheless, we learned a great deal. We learned, for example, that procedures which have been used with distressed middle class families are, apparently, insufficient for working with low SES abuse and neglect families. We must conclude that home-based intervention programs are, at once, uneconomical and ineffective over the long run. At the very least, a home-based treatment program will probably have to be combined with treatment outside the home. I shall mention one possibility in the next section.

## 7. CONCLUSIONS.

We have seen in this report that the maltreatment of children has a long and inglorious past. Neither the deliberate neglect of children nor violence towards them can be restricted to any one historical period nor to any single culture or society. We have considered statistical evidence which documents that the family is apparently the most common locus of interpersonal violence. We have also seen that there are certain natural characteristics of family life that contribute to the occurrence of violence and disaffection. These characteristics include the conflicts of interest that are intrinsic to group living and the intensity of emotional involvement that is found in kinship groups.

It has been a central thesis of this report and of PROJECT INTERACT that an accurate understanding of the causes of child abuse and its successful treatment require a careful and systematic examination of the patterns of social interaction that take place between all family members. In this report, you, the reader, have had an opportunity to inspect the products of our labor. It is my view that PROJECT INTERACT has significantly helped fill a severe lacuna in our knowledge. We have gone into the homes of abusive and neglectful families and we have carefully observed family members interacting with one another. While our total sample may seem small to the statistician, we have recorded literally hundreds of thousands of interpersonal transactions. This is costly and extremely time-consuming research, but there are no shortcuts. Hopefully, however, our efforts will inform and assist future researchers. The following appendices include information that was hard-earned and which should be helpful to others.

The data that I have described indicate quite clearly that there are distinctive ways that abusive and neglectful family members interact with one another. The overall level of interaction was lower than in our control families. This was especially the case for positive kinds of behavior such as praise and affection. Moreover, there is a tendency to accent the negative; to be critical and punitive. Interestingly, this was especially true of the neglect families. Yet these are the very families who are, themselves, ignored - both by the media as well as by professionals. We do tend to respond especially to the dramatic and sensational. We have seen different patterns of reciprocal exchange in these families and that the chronic absence of a parent as well as the number of children in the home can exaggerate those interaction patterns found in abusive and neglectful families. All of these data and their implications are discussed in the conclusion and discussion sub-sections of section 6.

Our research has also identified a number of problems that we were unable to solve, given our knowledge and resources at the time, and which will serve as the focus of our future research. Five problems stand out. First, there is a need to determine the extent to which the coercive styles of interaction we observed in the homes of these families are also present in their associations with non-family members. In particular, we need to explore the parents' relations with other adults, the children's relations with their parents outside the home, their relations with other adults as well as their relationships with peers. Some of the problems we faced in attempting to teach more effective yet humane social behaviors to the E. family seem to have been exacerbated by extra-family disputes and turmoil.

Second, the need still remains to develop and assess an intervention program that extends beyond the immediate family. This is the case for a number of reasons. One, home-based programs are expensive. We simply need to design more economical ways of effectively treating families. Two, with discouraging regularity behavioral scientists are reporting that parents fail to continue using behavioral control techniques after formal intervention training ceases; that parents report successful control of the behaviors selected as exemplars during the intervention, but are unable to generalize the techniques to new problem behaviors; or, that these techniques can be successfully used at home, but the parents fail to generalize their application to non-home settings.

Three, these families, especially in our rural setting, often are socially isolated. They frequently have no telephones, no functioning automobile, and no extended family or close-friend networks to draw upon for help in solving family problems. Four, in part due to their isolation, the parents seem to have little motivation to change their behaviors in ways that would serve to break the cycle of violence.

The final problem we identified is the desperate need to collect longitudinal data if we are to learn more about how coercive styles of behavior are acquired in the first place, what their situational antecedents are, and the kinds of environmental consequences that sustain them. Longitudinal data are also required to assess the effectiveness of our attempts to teach, encourage and sustain positive rather than negative styles of social interaction.

For these reasons, we hope to study a number of abusive-neglectful families within a cooperative preschool setting. In this manner, we plan to address each of the problems described above. It will be a "cooperative" preschool because the mother of each child will be required to spend at least one day per week as a paraprofessional teacher. This is true for the non-abusive control mothers as well as the abusive mothers. The incentive for this participation will be payment of the tuition cost and the provision of transportation where necessary.

These research plans have both basic and applied concerns. For example, with regard to the former, we will collect observational data in the home as well as in the preschool so that we can:

1) compare the patterns of interaction in the two settings;
2) compare the patterns of interaction with family and non-family members;
3) examine the generalization of behavior changes acquired in the preschool to the home setting;

4) investigate peer interaction among children from abusive and non-abusive homes;
5) explore the nature of the mothers' interactions with
    a) each other
    b) staff
    c) children other than their own.

So far as applied questions are concerned, we will investigate:

1) the development of guidelines and procedures for well-specified, efficient preschool routines;
2) optimum staff assignment so as to ensure both adequate child care and a high frequency of staff- and adult-child play and educational interaction;
3) the proper selection of toys that will facilitate social interaction;
4) the development of procedures that will involve the parents, as a group, to discuss, propose resolutions to, and assess common family problems;
5) the devleopment of a training package that can be used by low SES families;
6) the development of staff training procedures that will enable graduate and undergraduate students preparing for child service positions to be able to replicate this type of intervention program.

In each of these ways, e.g., by comparing (a) interaction among family members (mother-child) in the preschool with their behavior in their homes; (b) those patterns with the interaction that occurs when the entire family is present; and (c) their relationships towards one another with their interactions with non-family members in the preschool, we will be addressing directly the issue of "ecological validity". In short, the ecological setting - physical and social - is to be an integral part of our proposed research.

# APPENDICES

I. FAMILY INTERACTION CODE AND RECORDING RULES

II. TIME SAMPLING OBSERVATION CODE

III. OBSERVATIONAL CODE TRAINING TAPE

IV. DATA COLLECTION PROCEDURES

V. SCHEDULE OF RECENT EXPERIENCE

VI. SURVEY ON BRINGING UP CHILDREN

VII. PERCEPTIONS OF CHILDREN

VIII. MARITAL ADJUSTMENT SCALE

IX. OBSERVER RATING FORM

X. INFORMATION FOR PARENTS AND INFORMED CONSENT FORM

## PROJECT INTERACT FAMILY OBSERVATION CODE II

| BEHAVIOR Column 1 | AFFECT/QUALITY Column 2 | REFERENT(S) Columns 3 & 4 | COMMAND Column 5 | COMMAND-CONSEQUENCE Column 6 |
|---|---|---|---|---|
| 1. VERBAL GIVE | 1. NEUTRAL | 01 MOTHER | 1. INFORMATION REQUEST | 1. REFUSE |
| 2. VERBAL RECEIVE | 2. PERSONAL POSITIVE | 02 FATHER | 2. SPECIFIC COMMAND | 2. PROMISE |
| 3. PHYSICAL GIVE | 3. GENERAL POSITIVE | 03 ELDEST SIBLING | 3. AMBIGUOUS COMMAND | 3. COMPLY |
| 4. PHYSICAL RECEIVE | 4. PERSONAL NEGATIVE | YOUNGER SIBLINGS NUMBERED CONSECUTIVELY FROM ELDEST TO YOUNGEST (E.G. 04,05, ..., N OF SIBLINGS + 2) | 4. WARNING OF APPROPRIATE CONTINGENCY | 4. NO CHANCE TO COMPLY (SCORED 88884) |
| 5. INDEPENDENT TASK BEHAVIOR | 5. GENERAL NEGATIVE | 95 MALE RELATIVE<br>96 FEMALE RELATIVE<br>97 NON-HUMAN - ANIMATE OR INANIMATE | 5. WARNING OF INAPPROPRIATE CONTINGENCY | 5. TIME-OUT |
| 6. OBSERVATION | 6. MIXED | 98 SELF<br>99 GROUP | | 6. CORRECTION, REDIRECTION, OR OVERCORRECTION |
| | | | 7. NONE OF THE ABOVE | 7. NONE OF THE ABOVE |

DEFINITIONS

1. Subject/Respondents

| | |
|---|---|
| FOCUS: | Subject being observed |
| REFERENT: | The person with whom the Focus is interacting or the recipient of the Focus's behavior. The Referent may be another family member, a pet, an inanimate object (e.g., toy, book, etc.) or the Focus himself or herself. |

11. Behavior (Column 1)

1. VERBAL GIVE: Focus emits audible word(s) directed to one referent or a group. Word must be a "dictionary" word. Include common verbal expressions such as:
   "yeah" as in "yes" or "hurrah"
   "huh" as in "what?"
   "uh huh" as in "no"

A. Exclusions: Nonsense syllables, crying or whining, squeaks, giggles, grunts, cat calls, moans, etc. Do not score: "aaaa", "oooo", "eeeh",

B. Aids in determining to whom Focus directs verbalization
   1) Single Referent -
      a. Referent's name is used by Focus
      b. While verbalizing Focus's head is oriented toward Referent, Referent's possession or materials used by Referent
      c. Content of verbalization relates to interaction(s) previously scored as an interaction with the Focus.

   2) Self -
      a. Focus uses own name in verbalization
      b. While verbalizing Focus's head is oriented toward part of his or her own body, a possession, or materials that have been or are being manipulated by the Focus.

   3) Group -
      a. Focus uses the names of more than one Referent or uses a plural form of you (e.g., you guys)
      b. While verbalizing Focus's head is oriented toward more than one Referent, their possessions or materials used by them.

2. VERBAL RECEIVE: Focus receives audible word(s) from Referent.

A. Word must meet the criteria specified under Verbal Give definition.
B. Aids in determining if Focus is the recipient of a verbalization
   1) Focus's name is used by Referent.
   2) While verbalizing Referent's head is oriented toward Focus
   3) Content of verbalization relates to interaction(s) previously scored as an interaction with the Focus.

Note: Focus may be a part of a group receiving a verbalization from the Referent.
Example: Mother tells two children to pick up the toys and the Focus is one of the two children.

3. PHYSICAL GIVE: Focus touches, transfers material to, or physically complies to a command from a Referent.

A. TOUCH: Physcial contact between two persons or their clothing.

B. TRANSFER: Physical transference of material from focus to referent without intermediate contact by that material with the floor, some other object (e.g. table, chair) or a third person. The object may, however, pass through the air before making contact with the recipient of the behavior as when an object is thrown from one person to another. This definition does not include situation in which one person places an object in front of a second person who then picks it up (object was in contact with the floor in between contact with the first and second persons).

C. PHYSICAL COMPLIANCE: Focus performs some physical behavior in response to a command from a referent. Compliant behaviors are physical gives if they are:

1) Independent task behaviors as defined below

or

2) Other physical behaviors, such as walking, throwing, shutting a door, shutting up, etc. that are not usually scored, except when a focus complies to a command from a referent.

4. PHYSICAL RECEIVE: Referent touches, transfers material to, or physically complies to a command from a Focus.

A. TOUCH: Physical contact between two persons or their clothing.

B. TRANSFER: See definition in "B" above.

C. PHYSICAL COMPLIANCE: Focus receives some physical behavior from a referent in response to a command from Focus. Compliant behaviors are physical gives if they are:

1) Independent task behaviors (below) or (2) other physical behaviors (as defined in "C" above).

5. INDEPENDENT TASK BEHAVIOR: Focus performs a physical activity using some type of task materials without interacting either verbally or physically with another family member or pet. Focus and other family member(s) may be performing the same tasks simultaneously (in parallel). Activities may be performed appropriately or inappropriately and include:

A. Toy play: physical contact and manipulation of toys or objects utilized as toys.

B. Work: carrying out tasks such as doing homework, setting the table, or taking out the garbage.

C. Situation-related behaviors: performance of behaviors, such as eating at the dinner table, changing clothes at bedtime, putting away toys at the end of a game, that involve the manipulation of task materials.

Note: Behaviors that do not involve the manipulation of some type of task materials, such as walking, running, or jumping, are not scored independent task behavior.

Note: When a focus performs an Independent Task Behavior in compliance to a command from a referent, the compliance should be scored Physical Give (rather than Independent Task Behavior).

6. OBSERVATION: The Focus watches other family member(s) or pet(s) or their activity but does not interact verbally or physically. The Focus's face must be oriented toward the Referent(s). In addition, the Focus must not be performing any independent task behaviors concurrently. (Independent task behavior takes priority).
Examples: Focus sits quietly and observes another family member who is building a tower with blocks.

Focus stands beside two other family members who are play-fighting and watches this activity without joining in or trying to intervene.

Focus watches a cat as it plays with some string.

Note: Focus may be in contact with task materials but not actively manipulating them.

III. Affect (Column 2)

Note: The affect of verbal gives or receives is determined by the:
1) Content of Verbalization: the affective information conveyed by the content or words of the verbalization.
2) Tone of Verbalization: the affect conveyed by voice inflection, body posture, or facial expression which is distinct from the meaning of the words of the verbalization.

1. NEUTRAL: A behavior is scored as neutral if it is calm or matter-of-fact, and deals with matters of little import.
A. Verbal (Give or Receive): A verbalization is scored neutral if and only if both the content and the tone of the verbalization are neutral.
1) Examples
a. Explanations, directions, suggestions, or contingency statements (with a neutral tone): "Now kids. Let's build this house together"; "Your turn."; "Johnny, the ladies said not to talk with them during the game."; "Stop fighting or you will both go to time-out."; "I think you should put that over there."
b. Comments, asides, or questions (with a neutral tone): "O.K."; "I don't know.": "I wonder what Bill is making."; "Whose ball is this?"; "We're cleaning up now."
2) Aids in determining if verbalization is neutral:
a. First listen to the words or content of the verbalization. If the words are neutral (matter-of-fact), then attend to the tone of the verbalization. If you see no sign of a positive tone (e.g., lilting voice, smile, wink, grin) and no sign of a negative tone (e.g., unpleasant or grumbling inflection, frown, sneer) AND the content is neutral, score the verbalization neutral.

B. Physical (Give or Receive): Any physical interaction that consists of matter-of-fact touching, passing, handing or catching items.

1) Examples:

a. Touching - person touches another absentmindedly. for the purpose of completing a task.
Joe brushes shoulders with Rita as they both reach for toys.
The family members are sitting so closely together that their legs or arms are touching each other.

b. Passing, handling, or catching items -
Jill and Sue are passing a ball to each other.
Mother gives a puzzle piece to a child.

2) Aids in determining if physical interaction is neutral.
Consider the facial expression that accompanies the interaction. If neither the facial expression nor the physical contact is positive or negative, then the interaction is scored neutral.

C. Independent Task Behavior - no behavior classified as an independent task behavior should be scored neutral.

D. Observation - Focus watches other family member(s) or pet(s) while showing an expressionless face (i.e. face does not show either positive or negative expression such as smile, wink, sneer, frown, etc.).

2) PERSONAL POSITIVE: A behavior is scored personal positive if it is a statement or demonstration that indicates liking, approval, or support of the referent's actions, characteristics or possessions. A personal positive may be scored if the referent is a person or an animal.

a. Verbal (give or receive): A verbalization is scored personal positive if either of these three conditions is met:

(1) both the content and the tone of the verbalization are positive.

(2) the content of the verbalization is positive and the tone is neutral.

(3) the tone of the verbalization is positive and the content is neutral.

1) Examples:

a. both content and tone are positive:
"I like your shirt" with a lilting voice.
"I like you a lot." with a smile.
"Gee, you built a nice tower." with a wink.
"Almost!" with a positive inflection.
"Nice work!" with a positive inflection.
"Don't cry." with a concerned tone.
"Yes." with a positive inflection.

b. positive content and neutral tone:
"Almost" with flat tone.
"Yes" with matter-of-fact tone.
"I'll help you" with flat tone.
"you did it" with calm tone.

c. positive tone and neutral content:
"Are you ready?" with encouraging tone.
"C'mon. Throw it." with encouraging tone.
"Don't worry" with a smile or wink.
"How did you do that, Mary?" with a positive inflection.

2. Aids in determining if verbalization is personal positive:
   a. First listen to the words or content of the verbalization. Determine if the words are positive, i.e., the message is one of liking, support or approval of the persons actions, characteristics or possessions. Second, determine if the tone of the verbalization is positive, i.e., either a positive voice inflection, facial expression or body posture. If either the tone or the content or both are positive, score the verbalization personal positive.
   b. Look for positive content words, such as "yes", "help", "will", etc.

B. Physical (give or receive): Any physical interaction that indicates liking, support, or approval of the recipient or that helps the recipient. A behavior is scored Personal Positive whether the recipient of the behavior is a person or an animal.

1) Examples:

a. Touch. Person touches, pats, strokes, etc., other gently, with affection, sympathy, etc.
Ricky and Joe shake hands
Scott strokes Brad's back after Brad was being pushed down
Rita pats Mike on the back when he chokes on a sandwich
David puts his arm around Mark's shoulders
Toby and Rita hold hands
Child puts hand on mother's knee
Mother holds child on lap

b. Help. Person helps another physically.
Mother helps child put in puzzle piece by guiding child's hand. Mary helps Bob aim by guiding his arm when playing the ring toss game.

c. Give. Ricky gives Joe a birthday card.
Mark gives Scott a piece of candy.

Note: The object given must be special; not something that is transferred in the normal course of the manipulation of task materials. A transfer of regular task materials is scored neutral.

2) Aid in determining if physical interaction is personal positive,
   a. If interaction is accompanied by positive verbalization

C. Independent task behavior - NO behavior scored as independent task behavior should be scored personal positive.

D. Observation - NO behavior scored as observation should be scored personal positive.

3) GENERAL POSITIVE: A behavior is scored general positive if it is either:
   a. A "personal positive" verbalization that indicates liking, support or approval for someone or something other than the recipient of the behavior;
   b. the appropriate compliance to a command by means of a Physical Give or Receive.
   c. The appropriate manipulation of materials during independent task behavior; or

d. The observation of others accompanied by a positive facial or bodily expression.

A. Verbal (Give or Receive): A verbalization is scored general positive if either the content or the tone or both are positive, but the content indicates liking, support, or approval for someone or something other than the recipient of the behavior.

Note: Verbalizations indicating self-liking, self-support, or self-approval are scored general positive.

1) Examples:
  a. Self-reference:
    "I won!"
    "Mommy, look at the nice house I made."
    "I know I can do it."
  b. Reference to object or person other than recipient of behavior:
    "She's such a pretty kitty."
    "Jane is so fast."
    "I like pizza."
    "Jennifer is walking!" (with a positive tone).
    "I had fun in school today."

2) Aids in determining if verbalization is General Positive:
  a. Determine if the tone of the verbalization is positive (as defined above). If the tone is positive, then attend to the content of the words. If the content is positive but concerns someone or something other than the recipient of the verbalization, score the verbalization general positive.
  b. Refer to aids in determining positive tone and content above.

B. Physical (Give or Receive): No behavior scored as physical give or receive is scored general positive, except when a physical give or receive is an appropriate physical compliance (by means of an independent task behavior or other physical behavior).

Note: Appropriate physical compliance requires positive physical behavior, such as treating task materials as they were designed or complying with a nondescriptive or cooperative behavior.

1) Examples:
  a. Physical compliance - independent task behavior:
    -- Focus commands referent to stop throwing the blocks. Referent gently lays the blocks down.
    -- Referent commands Focus to "Take your turn." Focus steps up and throws the bean bag. (Physical give/general positive).
    -- Referent commands focus to pick up the toys. Focus does so. (Physical give/general positive.).
  b. Physical compliance - other physical behaviors:
    -- Focus commands referent to shut the door. Referent quietly shuts the door. (Physical receive/general positive).
    -- Referent commands focus to lower his voice. Focus lowers the volume of his voice (physical give/general positive).

-- Focus commands referent to walk, not run. Referent slows his/her pace (Physical receive/general positive).

C. Independent Task Behavior - Focus demonstrates appropriate manipulation of toys, tools or other materials associated with specific tasks.
Examples:
Stacking blocks
Building a house with blocks
Turning the pages of a book
Drawing with a crayon on a piece of paper
Fitting a piece into a puzzle
Placing a plate on the dinner table (setting the table)
Using a fork to transfer food from a plate to one's mouth

Note: Appropriate manipulation includes creative play with toys or other objects but not harmful or destructive actions, e.g., throwing, tearing, jumping on, beating or breaking toys or other objects.

D. Observation - When Focus observes others with a supportive or approving facial or bodily expression, the observation is scored General Positive.

4. PERSONAL NEGATIVE: A behavior is scored Personal Negative if it is a statement or demonstration of dislike, disapproval, or lack of support of the referent's actions, characteristics or possessions. A Personal Negative may be scored if the referent is a person or an animal.

A. Verbal (Give or Receive): A verbalization is scored Personal Negative if either of these three conditions is met:

1) Both the content and the tone of the verbalization are negative.

2) The content of the verbalization is negative and the tone is neutral.

3) The tone of the verbalization is negative and the content is neutral.

1) Examples:
a. both content and tone are negative:
"I don't want you next to me" with a negative inflection.
"Get off my side"with a grimace.
"You're a baby" with a dismissing wave of the hand.
"No!" with a negative tone.
"You're a rat!" with snarling tone
b. negative content and neutral tone:
"No" with a matter-of-fact tone.
"You did that wrong." with a flat tone.
"You always start a fight" with a calm tone.

c. negative tone and neutral content:
"Aren't you ready?" with impatient tone.
"Did you build that?" with a grimacing face.
"It's your turn again," rolling eyes upward.
"C'mon. Throw it" with negative inflection.

2) Aids in determining if verbalization is Personal Negative:
a. First listen to the words or content of the verbalization. Determine if the words are negative, i.e., the message is one of dislike, disapproval, or lack of support of the person's actions, characteristic, or possessions. Second, determine if the tone of the verbalization is negative, i.e., either a negative voice inflection, facial expression, or body posture. If either the tone or the content or both are negative, score the verbalization personal negative.
b. Look for negative content words, such as "no," "can't," "won't," "hit," "smash," etc.

B. Physical (Give or Receive): Any physical interaction that indicates dislike, disapproval, or lack of support of the recipient. A behavior is scored Personal Negative whether the recipient of the behavior is a person or an animal.

1) Examples:
a. Touch. Includes hit, kick, punch, shove, trip, push, bite, pinch, slap, beat, step on, grab or tear clothing, strike, etc.
Toby kicks Ricky in the stomach
Mark pushes David to the ground
Gene hits Mark in the neck
Laurie pinches Bill on the buttocks
Mike slaps Ray on the ears
Bert punches Sean
Sam grabs puzzle piece from Andy's hand
b. Throw.
Scott throws a rock at Ricky
Lauri spits on Mark
Ken hits Joe with a rock from a slingshot
Mike drops a tree branch on Brad
c. Misuse of object to strike or hit. Object not used as intended.
Toby pokes Ricky with pool cue
Bert slams basketball into Ken's head
Gene burns Brad with a cigarette
Scott throws a chair at Mark
2) Aids in determining if physical interaction is negative.
Interaction accompanied by negative facial expression, threatening gestures, or verbalizations, including gruff, angry, mean, or threatening intonation.

C. Independent Task Behavior: no behavior classified as an independent task behavior should be scored personal negative.

D. Observation: no behavior classified as observation should be scored personal negative.

5. GENERAL NEGATIVE: A behavior is scored General Negative if it is either:
   a. A "personal negative" verbalization that indicates dislike, disapproval, or lack of support for someone or something other than the recipient of the behavior;
   b. The inappropriate compliance to a command by means of a Physical Give or Receive.
   c. The inappropriate manipulation of materials during Independent Task Behavior;
   d. The observation of others with a negative facial or bodily expression.

A. Verbal (Give or Receive): A verbalization is scored General Negative if either the content or the tone or both are negative, but the content indicates dislike, disapproval, or lack of support for someone or something other than the recipient of the behavior.

Note: Verbalizations indicating dislike for, disapproval of, or lack of support for the self are scored general negative.

1) Examples:
   a. Self-reference:
      "I know I can't do it."
      "I always loose."
      "I hate it when I miss."
   b. Reference to object or person other than recipient of behavior:
      "This game is dumb."
      "Janie is stupid. Janie is stupid" (to Mother)
      "No. I don't want to help him."
      "We had a terrible dinner."

2) Aids in determining if verbalization is General Negative:
   a. Determine if the tone of the verbalization is negative (as defined above). If the tone is negative, then attend to the content of the words. If the content is negative, but concerns someone or something other than the recipient of the verbalization score the verbalization General Positive.
   b. Refer to aids in determinig negative tone and content above.

B. Physical (Give or Receive): No behavior scored as physical give or receive is scored General Negative, except when a physical give or receive is an inappropriate physical compliance (by means of an independent task behavior or other physical behavior.)

Note: Inappropraite physical compliance requires negative physical behaviors, such as mistreating task materials or complying with a disruptive or noncooperative behavior.

1) Examples:
   a. Physical compliance - Independent Task Behavior:
      -- Focus commands referent to stop throwing the blocks. Referent complies by slamming down all the blocks and stomping off (Physical Receive/General Negative).
      -- Referent commands focus to "Take your turn." Focus stomps up and deliberately throws the bean bag off the board (Physical give/General negative).
      -- Referent commands focus to pick up the toys. Focus does so, by throwing them down into the box (Physical give/General negative).
   b. Physical compliance - other physical behaviors:
      -- Focus commands referent to shut the door. Referent stomps over and slams the door (Physical Receive/General Negative).
      -- Referent commands focus to lower his voice. Focus defiantly stops talking all together (Physical give/General Negative).
      -- Focus commands referent to walk, not run. Referent stops running, but walks by stomping his feet. (Physical receive/General Negative).

C. Independent Task Behavior - Focus demonstrates an inappropriate manipulation of toys, tools or other materials associated with specific tasks.
Examples:
Throwing blocks against the wall
Tearing out the pages of a book
Drawing with a crayon on the wall
Chewing on a puzzle piece
Carrying plates on the head
Using a fork to catapult peas across the table

D. Observation - Focus watches other family members or pet(s) while showing a negative facial expression (frown, sneer, snarling) or bodily expression (feigned middle finger, negative physicals).

6. MIXED: A behavior is scored mixed if it is a statement or demonstration that contains both positive and negative components.

A. Verbal (Give or Receive): A verbalization is scored mixed if either of these three conditions is met:
1) mixed content in one verbalization;
2) positive content and negative tone;
or 3) negative content and positive tone.

1) Examples:
   a. Mixed content:
      "That's a nice tower for such a dumb kid."
      "You keep missing, but this game is hard."
   b. Positive content and negative tone:
      "I like that shirt" with a snarling face.
      "Suzy, you're so cute" with a hard poke.
      "You almost got it" with a sarcastic tone.
      "What's your problem?" with an impatient tone.
   c. Negative content and positive tone:
      "You just can't seem to sit still today, can you?"
      "Now, I don't want to have to smack you."
      "See, sometimes you don't act like such a brat."

2) Aids in determining if verbalization is mixed -
   a. Content and tone (voice inflection and bodily or facial expression) are in conflict (one is positive, the other negative).
   b. One part of the verbalization is positive and the other is negative.

B. Physical (Give or Receive) - negative or positive actions that are accompanied by facial expressions or gestures that are in conflict in terms of affect (e.g., positive action plus negative facial expression, negative action plus positive facial expression).
   1) Examples:
      a. Affectionate gesture accompanied by negative facial expression - John gives his mother a hug with a pained look on his face
      b. Playfighting - wrestling and rough play when accompanied by laughter and smiling faces.
   2) Aid in determining if action is mixed -
      Action contains positive and negative components.

C. Independent Task Behavior: No behavior classified as an independent task behavior should be scored mixed.

D. Observation: No behavior classified as observation should be scored mixed.

IV. Commands and Contingency Statements (Column 5)

1. INFORMATION REQUEST: Any command or request that asks the recipient to provide information by answering verbally. This category also includes instructions to give information to a third person.
   Examples:
   "Why do you keep pestering your little brother?"
   "What did you do in school today?"
   "What are we going to have for supper?"
   "Can't you think of something better to do?"
   "Tell me what you have in your mouth."
   "How many cookies have you eaten already?"
   "Tell me what you want to do tomorrow."
   "Tell your Daddy what you did in school today."
   "Karen tell Jim you're sorry."

   Note: (1) Information Request does not include rhetorical questions, such as: "You did it, didn't you?"
   "Don't throw that ball, O.K.?"
   "This is pretty hard, isn't it?"
   (2) The category of Information Request does include commands or requests to provide verbal information that are directed to a group.
   Examples:
   "Who's turn is it?" (to all children)
   "Did you see me throw it?" (to all children)
   "Why do we always have to play this game?" (to mother and father)

2. SPECIFIC COMMAND: Any order, rule, suggestion, or request to which a specific motoric response (including certain types of change in verbalizations) is appropriate and feasible. It must be possible for the recipient of the command to comply within the immediate time and space context of the observation session.

A. The following general categories should be included -

1) Prescriptive: Indicating a specific behavior should occur.
   Examples:
   "Jennifer, will you give the book back to your sister?"
   "Mommy, will you help me put this piece in?"
   "Go to the bathroom, right now!"
   "Lisa, the rule is: Stay at the table until we've all finished eating."
   "Let me look at that book, too."
   "Will you please hang up your coat?"
   "Time to pick up the toys now."
   "Let me help you with that puzzle.

2) Proscriptive: Indicating a specific ongoing behavior should stop.
   Examples:
   "Jane, stop that crying."
   "Mike, quit hitting me."
   "The rule is: NO wrestling!"
   "Get down off of that counter."
   "Will you please stop throwing those blocks around."
   "Remember, Leslie, the rule is: NO whining."
   "Stop interrupting me while I am talking to your father."

3) Proscriptive: Indicating a specific behavior that is about to occur should not occur.
   Examples:
   Mark is about to get up on the kitchen counter - "Don't climb on the counter."
   Sarah is about to hit her brother - "You'd better not hit me."
   Johnny is about to knock down Jamie's blocks - "Will you leave my blocks alone!"
   Kim has block in raised hand. Mother says, "Please don't throw that block."
   Tim is about to complain about a task his father has asked him to do. Father says, "I don't want to hear any complaints out of you."

Note: (1) Commands specifying a motor response that includes verbalization should be included in this category if the specified response involves a change in the tone quality or in the general classification of the verbalization.
Examples:
a. Change in tone quality -
   "Stop yelling this instant."
   "You are not supposed to whine when you ask me a question."
   "Ask me again in a quiet voice."

b. Change in general classification of verbalization -
"Don't interrupt me when I'm talking to your father."
"I don't want to hear any complaints from you."

(2) To be scored as a specific command, the verbalization must specify rather than imply the behavior desired from the recipient of the command. Therefore, verbalizations such as the following should not be scored specific commands:
"I want that doll."
"Your turn, Kim."
Child says, "Mine!" as an older sister begins to play with a toy.
Parent says, "I'm sorry you can't watch T.V. you don't have your homework done."

3. AMBIGUOUS COMMANDS: A verbalization that meets either of these three conditions is scored as Ambiguous Command:
1) An order, rule, suggestion, question or request that does not clearly specify the compliant behavior desired;
2) An order, rule, suggestion, question, or request for a compliant behavior that cannot occur within the time and space context of the observation session (e.g., a compliant behavior that should take place later in the day, one that should be repeated over and over again, or one that should occur in school);
3) Any order, rule, or suggestion that is directed to a group rather than an individual is scored ambiguous command. Note that Information Requests directed to a group are NOT scored Ambiguous Command.

1) Examples of Vague Commands:
"Quit being such a bratty kid."
"Will you please cooperate."
"You ought ot be nice to your sister."
"Be good now."
"Now, try to do it right this time."
"Johnny, stop it!"
"Don't talk like that to me."
"Cool it."

Note: (1) Vague verbalizations, even though accompanied by gestures that give additional information, should still be scored as ambiguous commands.
Examples:
Parent says, "Give me that" while pointing to the toy the child is holding.
Child says, "Don't you dare" to another child who is about to knock over a block tower.

(2) Verbalizations that imply that some response is desired, as described in "note 2, specific commands" about should not be scored as ambiguous commands. In other words, the observer must discriminate between a verbalization that includes a vague command (ambiguous command) and a his/her inference that a verbalization is an attempt to elicit a particular response from a recipient (Verbal give or Receive).

2) Examples where compliance to the command within the time and space context of the observation session is not possible:
"Don't you dare sass your teacher again."
"I don't want you to say that word(or do that thing) again."
"I want you to follow all my commands this week."
"Mommy, will you cook me a hamburger tonight?"
"Do your homework after dinner."
"Daddy, can we play this game tomorrow night?"

3) Examples of orders, rules, or suggestions that are directed to to a group:
"Kids, time to pick up those toys."
"Jim and Cindy, I want one of you to set the table, right now!"
"You guys better stop horsing around."
"Would somebody please turn off that radio?"
"Everybody sit still and be quiet until I'm finished talking on the phone."

4. APPROPRIATE CONTINGENCY: Warning statement indicating that acceptable punishing contingencies, such as time-out and response cost, will occur if compliance to a command is not given. The contingency statement may accompany a command (as in the example below), but the command and the contingency statement should be scored as two separate six digit entries.

Examples:

a. Time-out:
"Put that book on the shelf or you go to time-out."
"If you can't stop banging on the table, you will have to go to your room for five minutes."
"You'd better not touch that cake or you're going to sit in that chair for three minutes."
"You will go to time-out if you can't stop yelling at me."

b. Response Cost:
"If you don't pick up your toys now, I will put them away until Sunday."
"You two better stop fighting over that toy or neither of you will get to play with it any more today."
"Stop yelling or you will go without dessert tonight."
"Sit down and start your homework now or you won't get to watch any T.V. tonight.

5. INAPPROPRIATE CONTINGENCY: Warning statement indicating that unacceptable punishing contingencies involving physical punishment will occur if compliance to a command is not given. The contingency statement may accompany a command (as in the examples below), but the command and the contingency statement should be scored as two separate six digit entries.

Examples:
"Put that book on the shelf or you will get a spanking."
"I will have to get my belt to spank you if you don't stop yelling."
"You two better stop fighting over that toy or I'll have to use my spoon on you."

V. Command Consequence (Column 6)

1. REFUSE: A verbal statement by a command's recipient declining to conform to the command or questioning the appropriateness of the command. Refuse may be scored after information requests, specific commands, or ambiguous commands.
   Examples:
   Mother's Command "Put that book on the shelf now."
   Child's Response "I don't want to, I'm looking at it."

   Brother's Command "Stop banging on the table with that hammer."
   Sister's Response "No! This is fun."

   Sister's Command "You'd better not touch that cake."
   Brother's Response "You can't stop me."

   Child's Command "What are we having for dinner tonight?"
   Mother's Response "Leave me alone. I don't have time to tell you now."

   Father's Command "Stop it now!"
   Child's Response "Why should I?"

2. PROMISE: A verbal statement given by a command's recipient indicating that the recipient will (intends to) perform the behavior specified in the command. A promise may be scored after information request, specific commands or ambiguous commands.
   Examples:
   Mother's Command "Put that book on the shelf now."
   Child's Response "I will as soon as Michael gives me back my pencil."

   Brother's Command "Stop banging on the table with that hammer."
   Sister's Response "I just want to bang one more time, then I'll stop."

   Sister's Command "You'd better not touch that cake."
   Brother's Response: "I won't. I'm just looking at it."

   Child's Command "What are we having for dinner tonight?"
   Mother's Response "I'll tell you in a minute."

   Father's Command "Stop it now!"
   Child's Response "O.K., I will."

3. COMPLY: The performance of a specific motoric or verbal behavior that conforms with the directions of a preceeding Information Request or Specific Command or the performance of some motoric or verbal response indicated by a preceeding ambiguous command.
   Examples:
   Father (focus) says, "Put that book on the shelf now." Child picks up book, walks over and places book on shelf." (Enter: 430373)

   Mother (focus) says, "Quit banging on the table with that hammer." Child stops banging after four more bangs (Enter: 450373).

   "You'd better not touch that cake." Child continues to look at cake and stands poised to stick a finger in the icing but does not.

   "Tell me what you have in your hand." Child continues holding her hand behind her back but tells her mother, "A marble."

   "Mommy, what are we having for dinner tonight?" Mother immediately responds, "Macaroni and cheese".

"Stop that". Child stops throwing bean bags.

"C'mon kids. Let's clean-up." Jim and Sarah start to clean up.

Note: 1) Compliance to commands that do not specify whether the behavior requested should be physical or verbal should be scored if the recipient of the command responds appropriately physically and/or verbally.
Example:
Compliance to the question "What do you have in your hand?" should be scored if the recipient performs either or both of the following behaviors:
a. Child says, "A marble."
b. Child opens hand and shows the mother that she has a marble in her hand (Physical give/comply.)

2) If the recipient of a command gave a promise of compliance and later complies, score compliance whenever the compliant behavior occurs.

4. NO CHANCE TO COMPLY: This category should be scored when someone other than the original recipient of an information request or command performs the behavior specified.
Examples:
Mother says to Sarah, "Give that block back to your sister" followed by the mother grabbing the block away from Sarah.

Father says, "Tom, turn off the T.V. right now" followed by mother turning off the T.V. before Tom reaches the T.V.

Mother says, "Sarah, tell me what you have in your mouth" followed by Tim saying, "She's eating one of those cookies you told us not to eat."

Father says, "Mark, please bring me the newspaper" followed by Maggie taking the paper to her father.

5. TIME-OUT: Any verbal or physical behavior performed in the process of removing a child from a positively reinforcing situation for a specified period of time. The location and duration of time-out may vary amoung families but the specifications should be similar to the following examples:

Sitting on a chair in the corner for two minutes.
Sitting on the floor away from the family for three minutes.
Sitting in the hall alone for five minutes.
Staying in a room alone for five minutes.

Examples of parent behaviors to be included in this category:
A. Verbal announcement that the child is to be timed out
The announcement may specify the location and duration of time-out and/or the behavior expected during time-out.
"Since you continued banging on the table after I asked you not to, you'll have to sit on the time-out chair for two minutes."

"I told you no yelling, so now you have to go to time-out. Go to your room and be quiet until I tell you to come out."

"You are not supposed to throw things at your sister. Now you'll have to sit over here and cool off for a few minutes."

B. Additional instructions or physical guidance to the location of time-out.
Parent leads child by the hand to the time-out chair and says, "Sit here."

Parent picks up reluctant child and places the child on the time-out chair. "Sit here until I tell you you can get up."

C. Any instruction or physical guidance used to maintain the child in time-out.
Child gets up from the chair before the time has elapsed. Parent says, "Go back and sit down in that chair until I tell you you can get up."

Child repeatedly leaves the time-out chair. The parent leads the child back to the chair and briefly holds the child in the chair.

D. Verbal annoucement that the time-out period has passed and the child may leave the time-out location.
"The timer went off, so you may get up now."
"Time's up, you can go play."
"You've been quiet for two minutes so you can go back into the living room now."

6. CORRECTION: Any verbal or physical behavior that specifies that a change in the recipient's ongoing behavior should occur. The change specified should consist of an improvement of some aspect of the behavior.
Examples:
A. Correction of the manner in which a behavior is performed:
"It'll be easier to fit that puzzle piece in if you turn it just a little."

"You need to build the wall up a little higher so it will be even with this side.

"Speak a little louder so I can hear you."

B. Redirection-instructions shifting recipient's behavior to another activity. The new activity may be incompatible with ongoing behavior.

Child is stuffing puzzle pieces under the cushions of the sofa. Parent says, "I think you may have a piece that belongs to this puzzle. Bring them over here, and let's check them out."

Child is knocking down blocks just as fast as a sibling is able to stack them up. Parent says, "Linda, come over here and help me build a road to this house."

Child is arguing with a sibling about who has to take out the garbage next week. Parent says, "Karen, tell me what you did in school today."

C. Physical guidance designed to help the performance of the recipient's behavior. This category does not include those instances when parent of sibling performs the task for the child.

Sibling guides child's hand as the child tosses a ring in the ring toss game.

Parent turns child's hand holding a puzzle piece so that the piece fits into the puzzle.

Parent helps child guide cup to her mouth.

Sibling guides child's hand while the child writes the alphabet.

Note: Verbal correction or redirection may be accompanied by non-verbal demonstration (e.g., "Turn the puzzle piece like this." and parent demonstrates a quarter turn.)

7. RECORDING RULES:

1. A new six-digit entry should be scored whenever either of these two conditions is met:
   (1) A new behavior occurs. A new behavior is defined as a change in one or more of the column scores. Thus a new six-digit entry is scored when there is a change in at least one of the following:

   Behavior -- Column 1
   Affect -- Column 2
   Referent -- Columns 3 and 4
   Command -- Column 5
   Command Consequence -- Column 6

   or

   (2) There is a pause of at least three seconds between the same behavior. Count 1001, 1002, 1003, from the end of the preceeding behavior.

Examples:

1) No new entry:
Child (focus) hits brother with a block and within 3 seconds begins to punch the same brother with his fist (One entry: 340477)

Child (focus) stacks blocks to build a tower and within 3 seconds picks up an instruction sheet and looks at the pictures (One entry: 539777)

2) New entry:
Child (focus) hits brother with a block (340477) and then throws a block at another brother (even if throwing occurs within 3 seconds, change in referent requires a new entry: 340577.

Child (focus) stacks blocks to build a tower (539777) and then begins using a block to punch a hole in instruction sheet (even if punching hole occurs within three seconds, change in affect requires a new entry: 559777).

Mother says to child (focus), "Almost". (Enter 220477). Then there is a 3 second pause and mother says to same child, "You almost did it!" (Enter again: 220477).

Mother (focus) says, "Doug, tell Karen what you fixed for dinner tonight (110417) - verbal give, neutral, Doug, information request, none of the above). Doug turns to Karen and says, "I made peanut butter cookies" (220473 - verbal receive, Doug, none of the above, comply).

(7) To correct an error just after the incorrect entry has been scored, push the error button (":," lower left hand button), then rescore the entire six-digit entry. For editing purposes, the colon indicates that the entry just before the colon should be eliminated.
Examples (digits to be eliminated during editing are underlined):

1) $\underline{6}$:539777

2) $\underline{33}$:320377

3) $\underline{210337}$:110337

4) $\underline{310474}$
:310475

Mother (focus) is holding and rocking child in her arms continuously for two minutes. (Enter 320477 *every* three seconds.)

Mother (focus) to Karen: "Karen, please get more bread from the kitchen (Enter: 110327). Karen says, "O.K." "Shall I bring white or whole wheat bread?" (Two entries: 210373 and 210317).

*Notes*: (1) If certain behaviors occur that are *not* defined by the code (e.g., walking or sleeping), suspend scoring until a behavior occurs that *is* defined by the code.

(2) If a new behavior, defined by a change in score of at least one column, interrupts a continuous behavior score the new behavior. If the continuous behavior is still going of after the"interruption", rescore the continuous behavior.

*Example*: Child (focus) has been watching his brother build a tower for one minute (610577 was was re-entered every three seconds). Then mother says to child "You look tired, honey." (Enter: 220177). Child continues to observe his brother (Enter: 610577 and reenter 610577 every 3 seconds for as long as observation continues.)

(3) Push the entry button (lower right hand button) *immediately* after punching the key for the *last* digit of a six-digit entry.

(4) If a verbalization meets the criteria for *more than one score in a single column*, enter a separate six-digit entry for each score:

*Examples*:
"Quit being such a pest (140337) or you're going to your room" (140347).

"You'd better not throw that ball in the house (110327) or you'll have to sit in the chair for two minutes" (110347).

(5) To score the occurrence of "no change to comply", enter the digits 999994 at the time the "compliant" behavior is performed by someone other than the original recipient of the command.

(6) When a command is given by a Focus, compliant behavior should be scored as received by the Focus even though the behavior is actually directed to someone (or something)else.
*Examples*:
Father (focus) says, "Mark, give one of those puzzles to Andy" (110327-verbal give, neutral, Mark, specific command, none of the above). Mark then gives a puzzle to Andy (430373 - *physical receive*, general positive, Mark, none of the above, comply).

# PROJECT INTERACT TIME-SAMPLING OBSERVATION CODE

This code is used in observing the interaction among family members. The family is made up of a mother, daughter and three boys, the daughter being the oldest of the four siblings. The data are taken within the family's home (e.g. living room) twice a week early in the evening after dinner. Each observation session is divided into two separate tasks: skill tasks (ring toss, basketball, toss-across) and construction tasks (Lego, blocks, Lincoln logs, Tinker Toys). One of each of these types of tasks is introduced to the family during the obwervation session to promote interaction among family members.

The observations take 15-20 minutes per task, depending on the number of family members present. During each task, one at a time, each family member serves as a focal subject. The focal subject is observed for two consecutive minutes as he/she interacts with other family members. After every two-minute period, the focal subject changes in an order that is randomly determined before each session. The order is then repeated, resulting in a total of four minutes of observation time for every subject.

The observer has with him/her data sheets, pencil and a stopwatch. Behaviors are observed within 10-second intervals. The observer uses the stopwatch to note the transition from one 10-second interval to the next. When a particular behavior occurs within a specified 10-second interval, the observer records the behavior within that interval.

Each subject is scored on his verbal and physical interactions with other family members. The observer records whether the behaviors were given (initiated) by the subject or received by the subject. The emotional affect of the behavior is also recorded. When no interaction has occurred in a given interval, the observer records either that the subject is involved in an independent task behavior or that the subject is observing another family member.

SAMPLE DATA SHEET

Family ____________________ Observer ____________________

Date ____________________ Task ____________________

Condition ____________________

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Focus ___ | V | | | | | | | | | | | | |
| | P | | | | | | | | | | | | |
| | ITB | | | | | | | | | | | | |
| | 0 | | | | | | | | | | | | |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Focus ___ | V | | | | | | | | | | | | |
| | P | | | | | | | | | | | | |
| | ITB | | | | | | | | | | | | |
| | 0 | | | | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Focus ___ | V | | | | | | | | | | | | |
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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Focus ___ | V | | | | | | | | | | | | |
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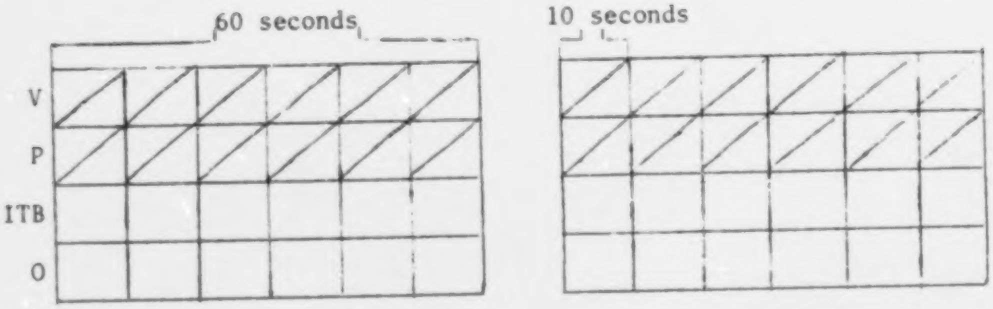
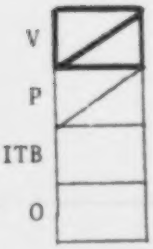
Project Interact Observation Code

## DATA RECORDING GRID

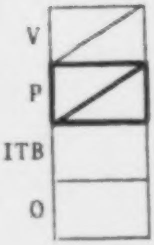


1.



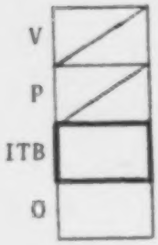
V = verbal behavior; the top line of blocks is designated for recording verbal interactions.

2.



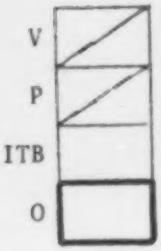
P = physical behavior; the second line of blocks is designated for recording physical interactions.

3.



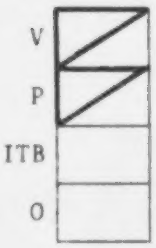
ITB = independent task behavior; the third line of blocks is designated for recording periods in which the subject is manipulating task materials.

4.



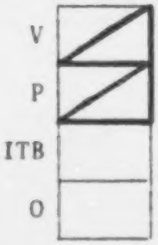
O = observation; the last line of blocks is designated for recording periods in which the subject is observing or watching other family members.

5.



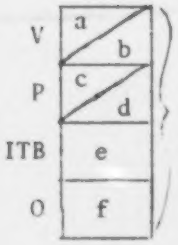
= Gives Triangle; the upper left of the verbal or physical 10-second block; the behavior of the focal subject in which he or she gives (initiates) a verbal or physical behavior is recorded in this triangle.

6.



= Receives Triangle; the lower right half of the verbal or physical 10-second block; the verbal or physical behavior received by the focal subject from other family members is recorded in this triangle

7.



a. Verbal gives are recorded here.
b. Verbal receives are recorded here.
c. Physical gives are recorded here.
d. Physical receives are recorded here.
e. Independent task behavior is recorded here.
f. Observation is recorded here.
g. The entire block (including all of the above) represents one 10-second interval.

Project Interact Observation Code

## SYMBOLS

The following symbols are used in recording both verbal gives and receives and physical gives and receives:

2 - personal positive interaction

4 - personal negative interaction

6 - mixed interaction

✓ - neutral, general positive or general negative interaction

When a child is the focal subject, interactions with the mother are indicated by circling the symbols recorded (i.e., ② ④ ⑥,✓).

When the mother is the focal subject, interactions with the eldest daughter are indicated by circling the symbols recorded (i.e., ②, ④, ⑥,✓).

The following symbols are used in recording independent task behaviors:

3 - positive; appropriate activity

5 - negative; inappropriate activity

The following symbol is used in recording observation:

✓ - observing other family members and their activities

## DEFINITIONS

### Subject/Respondents

| | |
|---|---|
| Focus· | Subject being observed |
| Referent: | The family member with whom the focus is interacting or the recipient of focus' behavior. |

### Behaviors

1. Interactions

    A. Verbal Gives and Receives

        1. General Definition

            a. Verbal Give: Focus emits audible word(s) directed to one referent or a group. Word must be a "dictionary word." Include common verbal expressions such as: "yeah" as in "yes" or "hurrah," "huh" as in "what?", "uh-huh" as in "no."

                1) Exclusions: Nonsense syllables, squeaks, giggles, grunts cat calls, moans, etc. Do not score: "aaaa," "oooo," "eech."

2) Aids in determining to whom focus directs verbalization:
   a) Single referent -
      i) Referent's name is used by focus.
      ii) While verbalizing, focus' head is oriented toward referent, toward referent's possessions or materials used by referent.
      iii) Content of verbalization relates to interaction(s) previously scored as an interaction with the focus.

   b) Self -
      i) Focus uses own name in verbalization.
      ii) While verbalizing, focus' head is oriented toward part of his/her own body, a possession or materials that have been or are being manipulated by the focus.

   c) Group -
      i) Focus uses the names of more than one referent or uses a plural form of you (e.g., you guys)
      ii) While verbalizing, focus' head is oriented toward more than one referent, toward their possessions or materials used by them.

b. Verbal Receive: Focus receives audible word(s) from referent.

1) A word must meet the criteria specified under verbal give definition.

2) Aids in determining if focus is the recipient of a verbalization:
   a) Focus' name is used by referent.

   b) While verbalizing, referent's head is oriented toward focus.

   c) Content of verbalization relates to interaction(s) previously scored as an interaction with the focus.

   Note: Focus may be part of a group receiving a verbalization from the referent. Example: Mother tells two children to pick up toys and the focus is one of the two children.

2. Affect/Quality

a. General Comments (code symbol - ✓). A behavior is scored as a general comment if it falls under the category of neutral, general positive or general negative.

1) Neutral - verbalizations that are expressed in a matter-of-fact, calm tone, usually pertaining to matters of little importance.

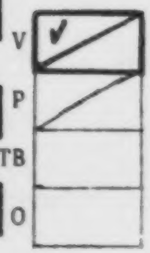
   a) Examples:
      i) Explanations, directions, suggestions or contingency statements:

      "Now, kids, let's build this house together."

      "Johnny, the ladies said not to talk with them during the game."

      "Well, Mary, according to this paper that block should be placed over there."

      "If you don't stop fighting, you will both go to time-out."



Verbal Give,
Neutral

ii) Comments, asides, questions:

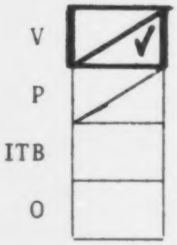
"I wonder what Bill is making."

"Marge, did you ever think you'd be playing these games again?"

"Whose ball is this?"

"You know, we should do these things with the kids more often."

"We're cleaning up the garbage."

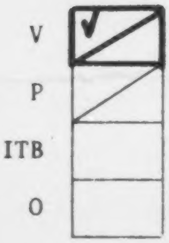


Verbal Receive,
Neutral

b) Aids in determining if verbalization is neutral. Look at facial expression in addition to listening to verbal content. If you see no sign of a positive expression such as a smile, wink, grin or laugh, or negative expression such as a frown, sneer, etc., then score the interaction neutral.

2) General Positive (code symbol - ✓). A behavior is also scored as a general comment when a verbalization indicates self-approval or support for someone (something) other than the recipient of the behavior.

This includes any statement, question or command given by the focus or referent that praises an action, characteristic or possession of the speaker (self-approval) or of someone (something) other than the recipient of the behavior. This category also should be scored when the speaker makes a pleasant comment that expresses the speaker's positive mood, personal likes or positive experiences or a neutral comment accompanied by a pleasant intonation, supportive facial expression or gesture.



Verbal Give,
General Positive

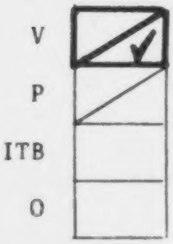
a) Examples:

i) Positive self description:

"Boy, I've really been working hard."

"I won."

"Mommy, look what a nice house I made."



Verbal Receive,
General Positive

ii) Approval or support of someone (something) other than the recipient of the verbalization:

"Jane has 14 points already."

"She's such a pretty kitty."

"I like working on puzzles."

"Dad, I'll help Johnny with that."

iii) Positive experiences:

"This was fun."

"We really had a good time at the park, didn't we?"

"I'd like to go to Florida."

iv) Positive mood:

"I've been feeling good today."

"I'm excited about our plans for the weekend."

"What a good day this has been."

v) Neutral comment accompanied by pleasant intonation, supportive facial expression or gesture:

"We're having pizza dinner tonight." accompanied by laughing.

"Bill's coming home tomorrow." accompanied by pleasant intonation and smile.

"Jennifer is walking." accompanied by clapping and smiling.

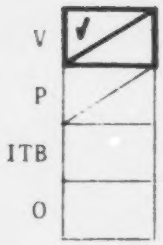
b) Aids in determining if verbalization is general positive.

i) Verbalization accompanied by positive facial expressions such as smiling, laughing, grinning.

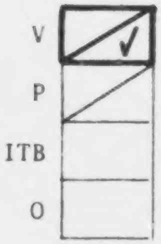
ii) Verbalizations accompanied by positive gestures such as clapping.

iii) Pleasant intonation.

iv) Verbalizations with positive words.



Verbal Give,
General Negative



Verbal Receive
General Negative

3. General Negative (code symbol - ✓). A behavior is also scored as a general comment when it is a verbalization indicating self-criticism disapproval or lack of support for something or someone other than the recipient of the behavior:

This includes any statement, question or command given by the focus or referent that criticizes an action or characteristic of the speaker (self-criticism) or of someone (something) other than the recipient of the behavior. This category should be scored when the speaker makes an unpleasant comment that expresses the speaker's negative mood, personal dislikes, or negative experiences or a neutral comment accompanied by a gruff or angry intonation, disapproving facial expression or gesture.

a) Examples:

i) Negative self-description:

"I'll never get it right."

"I always lose."

"My clothes are really crummy looking."

ii) Criticism or lack of support of someone (something) other than the recipient of the behavior:

"Jane doesn't know how to play right."

"What a dumb cat."

"Puzzles are yucky."

"No, I'm not going to help him."

"Mom, keep Dad away from me! He hit me."

iii) Negative experiences:

"This is such a boring game."

"Who would want to go to the park. There's nothing to do there."

"Spending a vacation in Florida would be like walking into a great big tourist trap."

iv) Negative mood:

"I've been feeling lousy all day."

"I could care less what we do."

"Every day things just get worse and worse."

v) Neutral comment accompanied by a gruff or angry intonation, disapproving facial expressions or gesture:

"We're having pizza for dinner tonight." accompanied by pained expression and a thumbs down gesture.

"We could build a race track." said with a reluctant intonation and accompanied by a frown.

"Bill's coming home tomorrow." accompanied by frown, angry tone and pounding of fist on the table.

b) Aids in determining if verbalization is general negative:

i) Verbalization accompanied by negative facial expressions such as snarling, growling, sneering, wrinkled nose or forehead.

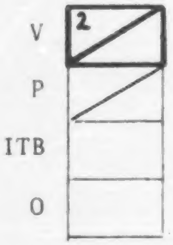
ii) Verbalizations accompanied by negative physicals or threatening gestures (feigning middle finger, negative physicals).

iii) Gruff, angry, mean, or threatening intonation.

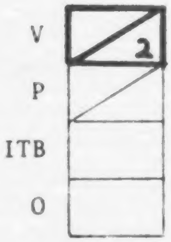
iv) Verbalizations with violence oriented words -

smash
break
slug
maim
poke
kill
destroy
hit
pulverize
kick

b. Personal Positive (code number - 2). A behavior must include a statement or demonstration that indicates liking, approval, or support of the recipient's actions, characteristics or possession.



Verbal Give, Positive



Verbal Receive, Positive

Note: If any aspect of the behavior is negative, then it should not be scored personal positive.

1) Examples:
   Any statement, question or command given by the focus or referent that praises an action, characteristic or possession of the recipient. It must clearly show liking, approval or support of the recipient's actions, characteristics, or possession.

   a) Positive personal description or showing approval:

      "I like that shirt." referring to recipient's shirt.

      "I enjoy being with you."

      "I like you more than anyone else."

      "Thank you for doing that."

      "You look pretty today, Rita."

   b) Supportive verbalizations:

      "It's not your fault. Don't worry about it."

      "You can do it if you try."

      "It will work next time."

      "I'll help you do that."

   c) Praising recipient's actions:

      "You've got a lot of points, don't you?"

      "Nice going."

      "That's good work, Bill."

      "What a high tower!"

2) Aids in determining if verbalization is personal positive:

   a) Verbalization accompanied by positive facial expressions such as smiling, laughing, grinning.

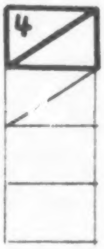
   b) Verbalization accompanied by positive physicals (handshake, pat-on-back) or gestures (hand wave, shaking head yes, motioning to come, clapping).

   c) Verbalizations with positive words: help, like, yes, will.

   d) Positive intonation.

   e) Verbalization includes an endearment such as "honey" or "sweetheart."

Note: A verbalization may be accompanied by any or all of the above positive characteristics but must, in addition, indicate liking, approval or support of the recipient, the recipient's behavior or possession before the verbalization should be scored personal positive.

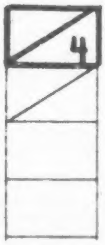


Verbal Give, Negative

c. Personal Negative (code number - 4). To be scored a personal negative, a behavior must include a statement or demonstration that indicates dislike, disapproval or lack of support of recipient's actions, characteristics or possession.

Note: If any aspect of the behavior is positive, then it should not be scored personal negative.

1) Examples:
Any statement, question or command given by the focus or referent that criticizes an action, characteristic or possession of the recipient. It must clearly show dislike, disapproval or lack of support of the recipient's actions or characteristics.



Verbal Receive, Negative

a) Dislike or disapproval:

"I don't want you next to me."

"Get off, get off my side."

"I've never seen someone so sloppy."

"Why do you always cry like such a baby?"

"Well, aren't you a little ragamuffin!"

b) Threatening verbalizations:

"I'll throw this at you."

"I'm going to tell Rita you don't like her."

"I'm going to tell on you."

"I'm going to kill you!"

"You're going to get a spanking."

c) Negative contingency verbalizations (usually involving a threat):

"If you wet your pants, you're going to get a spanking."

"If you throw that at me, I'll kick you."

"If you don't, I'll tell Rita."

"Give me the ball or I'll tell Lauri to beat you up."

"You better hush up or you're going to go without dinner."

d) Insults, name-calling, slander and other demeaning verbalizations:

"You son-of-a-bitch."

"You're not very good at that."

"You sissy."

"You're not big enough."

"You smell."

"Rita doesn't like your looks."

"It's all your fault."

"You're a brat."

2) Aids in determining if verbalization is negative:

a) Verbalizations accompanied by negative facial expressions such as snarling, squinted eyes, frowning, growling, wrinkled nose or forehead.

b) Verbalizations accompanied by negative physicals or threatening gestures (feigning middle finger, negative physicals).

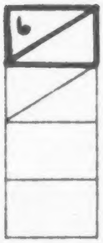
c) Gruff, angry, mean or threatening intonation.

d) Verbalization with violence oriented words - smash, .. break, kill, kick, poke, slug, hit, pulverize, etc.

e) Verbalization spoken with whining intonation.

Note: A verbalization may be accompanied by any or all of the above negative characteristics but must, in addition, indicate dislike, disapproval or lack of support of the recipient, the recipient's behavior or possession before the verbalization should be scored personal negative.

d. Mixed (code number - 6). Verbal interactions that include both positive and negative components should be scored mixed. These verbalizations may contain a combination of positive and negative either in content or in the content and facial expression or tone.



Verbal Give,
Mixed

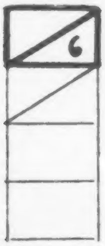
1) Teasing:

"Even though you're dumb, you're still my favorite gal."

"You're such a weirdo." (said in a playful way while the speaker smiles).

"You built a really good tower for such a clumsy kid."

"Just because you're an A student, you think you don't have to help around the house."



Verbal Receive,
Mixed

2) Sarcasm:

"Susie, you're just so cute." (after Susie has just pulled her sister's hair).

"I'm so glad I'm on your team." (after person has just made a mistake).

"You really did a good job, didn't you?" (angry tone).

B. Physical Gives and Receives

1. General Definitions:

a. Physical Give: Focus extends a portion of his body and touches the referent.

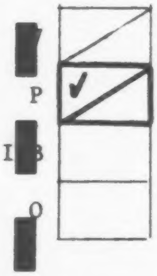
1) Touch: Physical contact from focus to referent.

2) Physical transference of material from focus to referent without intermediate contact by that material with the floor, some other object (e.g., table, chair) or a third person. The object may, however, pass through the air before making contact with the recipient of the behavior as when an object is thrown from one person to another. This definition does not include situations in which one person places an object in front of a second person who then picks it up (object was in contact with the floor in between contact with the first and second persons).

b. Physical Receive: Focus receives a touch from one referent.

1) Touch: Physical contact from referent to focus or their clothing.

2) See definition for physical give for clarification of physical transference.



Physical Give, Neutral

2. Affect/Quality

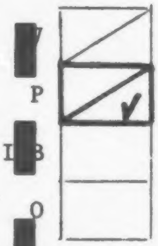
a. Neutral (code symbol - ✓). Interactions consisting of matter-of-fact touching, passing, handing or catching.

1) Examples:

a) Touching: Person touches another absentmindedly, for the purpose of completing a task.
Joe brushes shoulders with Rita as they both reach for toys.
The family members are sitting so closely together that their legs or arms are touching each other.

b) Passing, handing or catching items:
Bill and are Sue passing a ball to each other.
Mother gives a puzzle piece to a child.

2) Aids in determining if physical interaction is neutral. Consider the facial expression that accompanies the interaction. If neither the facial expression nor the physical contact is positive or negative, then the interaction is scored neutral.

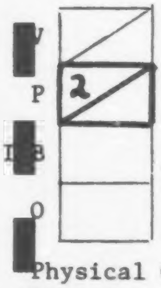


Physical Receive, Neutral

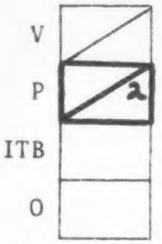
b. Personal Positive (code number - 2). Any physical interaction that indicates affection, sympathy or approval of the recipient or help to the recipient.

1) Examples:

a) Touching: Person touches, pats, strokes, etc. other gently, with affection, sympathy, etc.
Ricky and Joe shake hands.
Scott strokes Brad's back after Brad was pushed down.
Rita pats Mike on the back when he chokes on a sandwich.
David puts his arm around Mike's shoulders.
Toby and Rita hold hands.
Child puts his hand on mother's knee.
Mother holds child on lap.



Physical Give, Positive



Physical Receive, Positive

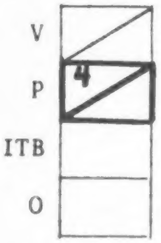
b) Help: Person helps another physically.
Mother helps child put in puzzle piece by guiding child's hand.
Mary helps Bob aim by guiding his arm when playing the ring toss game.

c) Give:
Ricky gives Joe a birthday card.
Mark gives Scott a piece of chocolate.

Note: Whatever is given may be (but not necessarily) something special, not something transferred in the normal course of a game, school procedures, formal or informal interactions.

2) Aids in determining if physical interaction is personal positive interaction accompanied by positive facial expressions, gestures or verbalizations.

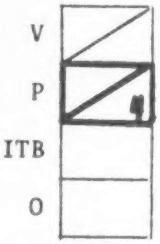
c. Personal Negative (code number - 4). Any physical interaction indicating dislike, disapproval or lack of support of the recipient.



Physical Give, Negative

1) Examples:

a) Touching: Includes hit, punch, kick, shove, trip, push, bite, pinch, slap, beat, step on, grab or tear clothing, etc.
Toby kicks Ricky in the stomach.
Mark pushes Dave to the ground.
Gene hits Mark in the neck.
Lauri pinches Bill in the buttocks.
Mike slaps Ray on the ears.
Bert punches Shaun.
Sam grabs puzzle piece from Andy's hand.



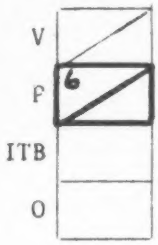
Physical Receive, Negative

b) Throwing:
Scott throws a rock at Ricky.
Lauri spits on Mark.
Ken hits Joe with a rock from a slingshot.
Mike drops a tree branch on Brad.

c) Misuse of object to strike or hit. Object not used as intended:
Toby pokes Rick with a pool cue.
Bert slams basketball into Ken's head.
Gene burns Brad with a cigarette.
Scott throws a chair at Mark.

2) Aids in determining if physical interaction is negative. Interaction accompanied by negative facial expression, threatening gestures or verbalizations, including gruff, angry, mean or threatening intonation.

Project Interact Observation Code



Physical Give, Mixed

d. Mixed (code number - 6). Negative or positive actions that are accompanied by facial expressions or gestures that are in conflict in terms of affect (e.g., positive action plus positive facial expression).

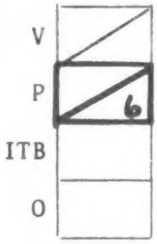
1) Examples:

a) Affectionate gesture accompanied by negative facial expression.

John gives his mother a hug with pained expression on his face.

b) Playfighting: Wrestling, rough play when accompanied by laughter and smiling faces.

2) Aid in determining if action is mixed:
Action contains positive and negative components.



Physical Receive, Mixed

II. Independent Behaviors

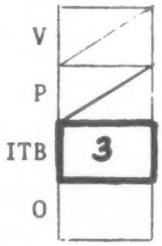
A. Independent Task Behavior

1. General Definition: Focus performs a physical activity without interacting either verbally or physically with another family member. Focus and other family member(s) may be performing the same tasks simultaneously (in parallel). Activities may be performed appropriately or inappropriately and include:

a) Toy play:
Manipulation of toys or objects utilized as toys.

b) Work:
Carrying out tasks such as doing homework, setting the table, or taking out the garbage.

c) Situation-related Behaviors:
Performance of behaviors such as eating at the dinner table, changing clothes at bed time, putting away toys at the end of a game, etc.



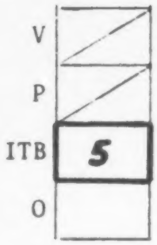
Independent Task Behavior, Appropriate

2. Affect/Quality

a) General Positive (code number - 3). The focus demonstrates appropriate manipulation of toys, tools or other materials associated with specific tasks.
Examples:
Stacking blocks
Building a house
Turning the pages of a book
Drawing with a crayon on a piece of paper
Fitting a piece into a puzzle
Placing a plate on the dinner table (setting the table)
Using a fork to transfer food from a plate to one's mouth

Note: Appropriate manipulation includes creative play with toys or other objects but not harmful or destructive actions (e.g., throwing, tearing, jumping on, beating or breaking toys or other objects).

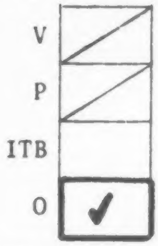
b. General Negative (code number - 5). Focus demonstrates an inappropriate manipulation of toys, tools or other materials associated with specific tasks.
Examples:
Throwing blocks against the wall
Tearing out pages of a book
Drawing with a crayon on the wall
Chewing on a puzzle piece
Carrying plates on the head
Using a fork to catapult peas across the table



Independent Task Behavior, Inappropriate

B. Observation (code symbol - ✓). The focus watches other family member (s) or their activity but does not interact verbally or their activity but does not interact verbally or physically. The focus' face must be oriented toward the referent(s). In addition, the focus must not be performing any independent task behavior concurrently (independent task behavior takes priority).
Examples:
Focus sits quietly and observes another family member who is building a tower with blocks.
Focus stands beside two other family members who are playfighting and watches this activity without joining in or trying to intervene.
Focus watches a cat while it plays with some string.

Note: Focus may be in contact with task materials but not actively manipulating them.



Observation

## GENERAL RECORDING RULES

1. Be sure all stopwatches are started together. Even one or two seconds off can make a drastic difference in recording for each ten-second interval.

2. Observer should not interact with family members during recording.

3. A behavior which occurs at the change from one ten-second interval to the next should be recorded in the latter interval.

4. Verbal and physical interactions take priority over independent task behavior and observation. Therefore, if independent task behavior or observation occurs throughout most of the ten-second interval but a brief verbal or physical interaction occurs sometime within the ten-second interval, the verbal or physical interaction is recorded and no observation is recorded for that interval.

5. Independent task behavior takes priority over observation. Therefore, if observation occurs throughout most of the ten-second interval but an independent task behavior occurs even briefly before the ten-second interval is up, the independent task behavior is recorded and no observation is recorded for that interval.

6. When one of the children is serving as the focal subject and that child interacts with the mother verbally or physically, circle the symbol denoting the affect of the interaction (e.g., Mother says, "Good work, Steve." ② ). When the mother serves as the focal subject, circle symbols recorded to indicate an interaction between the mother and the eldest child (the daughter, in this case).

Project Interact Observation

## PRACTICE EXERCISE

Instructions: Read the example and score the behavior in the one 10-second interval provided. Assume each behavior is the only behavior that occurs in 10 seconds.

1. Mother is the focus.

A. Mother says to son, "John, put that plate on the table."

| | |
|---|---|
| V | |
| P | |
| ITB | |
| O | |

B. Frowning, mother says, "I hate my clothes."

| | |
|---|---|
| V | |
| P | |
| ITB | |
| O | |

C. Mother says to son, laughing, "Boy, are you stupid."

| | |
|---|---|
| V | |
| P | |
| ITB | |
| O | |

D. Mother says to group, "I like playing basketball."

| | |
|---|---|
| V | |
| P | |
| ITB | |
| O | |

E. Mother says to son, gruffly, "I can't stand your whining."

| | |
|---|---|
| V | |
| P | |
| ITB | |

F. Daughter says to mother, smiling. "Good shot."

| | |
|---|---|
| V | |
| P | |
| ITB | |
| O | |

G. Mother says to daughter, smiling, "Your hair looks pretty today."

| | |
|---|---|
| V | |
| P | |
| ITB | |
| O | |

H. Son says to mother, "Pass me that block."

| | |
|---|---|
| V | |
| P | |
| ITB | |
| O | |

II. Daughter is focus.

A. Daughter twists son's ear with a mean look on her face.

| | |
|---|---|
| V | |
| P | |
| ITB | |
| O | |

B. Daughter is watching as the other members of the family build a house out of Lincoln logs.

| | |
|---|---|
| V | |
| P | |
| ITB | |
| O | |

C. Mother says to daughter, roughly, "Get over here before I hit you."

| | |
|---|---|
| V | / |
| P | / |
| ITB | |
| O | |

D. Daughter pats son on back, smiling, while saying, "Good job."

| | |
|---|---|
| V | / |
| P | / |
| ITB | |
| O | |

E. Son says to daughter, laughing, "You're such a jerk."

| | |
|---|---|
| V | / |
| P | / |
| ITB | |
| O | |

III. Son is the focus.

A. Daughter hands son a Lincoln log piece.

| | |
|---|---|
| V | / |
| P | / |
| ITB | |
| O | |

B. Daughter, laughing, starts wrestling with the son and pushes him to the floor.

| | |
|---|---|
| V | / |
| P | / |
| ITB | |
| O | |

C. Son puts arm around mother while making an angry face.

| | |
|---|---|
| V | / |
| P | / |
| ITB | |
| O | |

D. Daughter smacks son on the back of the head and says, "You retard!"

| | |
|---|---|
| V | / |
| P | / |
| ITB | |
| O | |

E. Mother puts arm around son and smiles.

| | |
|---|---|
| V | / |
| P | / |
| ITB | |
| O | |

IV. Daughter is the focus.

A. Daughter sits quietly, putting together a building out of blocks.

| | |
|---|---|
| V | / |
| P | / |
| ITB | |
| O | |

B. Daughter passes mother a playing card and says, "here it is."

| | |
|---|---|
| V | / |
| P | / |
| ITB | |
| O | |

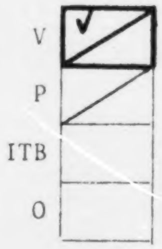
C. Daughter throws blocks against the wall.

| | |
|---|---|
| V | / |
| P | / |
| ITB | |
| O | |

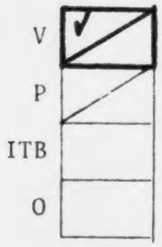
## Answers to Examples

1. Mother is the focus.

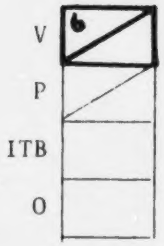
A. Verbal Give, neutral



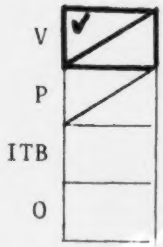
B. Verbal Give, neutral



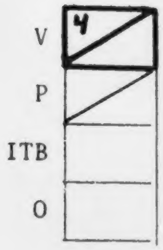
C. Verbal Give, mixed



D. Verbal Give, neutral



E. Verbal Give, negative



Project Interact Observation Code

F. Verbal Receive, positive, from daughter

| | |
|---|---|
| V | ② |
| P | |
| ITB | |
| O | |

G. Verbal Give, positive, to daughter

| | |
|---|---|
| V | ② |
| P | |
| ITB | |
| O | |

H. Verbal Receive, neutral

| | |
|---|---|
| V | ✓ |
| P | |
| ITB | |
| O | |

II. Daughter is the focus.

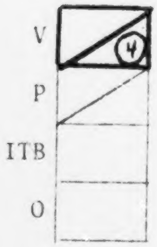
A. Physical Give, negative

| | |
|---|---|
| V | |
| P | 4 |
| ITB | |
| O | |

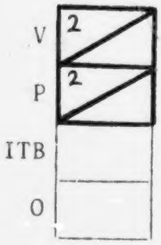
B. Observation

| | |
|---|---|
| V | |
| P | |
| ITB | |
| O | ✓ |

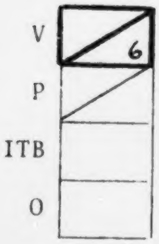
C. Verbal Receive, negative from mother



D. Physical Give, positive;
Verbal Give, positive

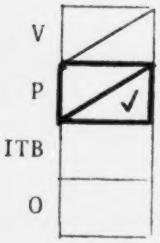


E. Verbal Receive, mixed

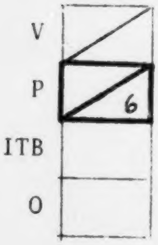


III. Son is the focus.

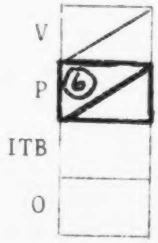
A. Physical Receive, neutral



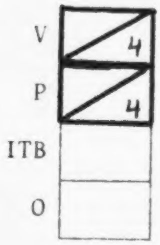
B. Physical Receive, mixed



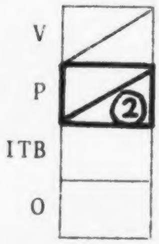
C. Physical Give, mixed, to mother



D. Physical Receive, negative;
Verbal Receive, negative

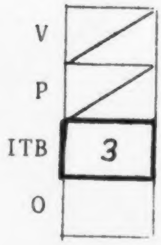


E. Physical Receive, positive, from mother

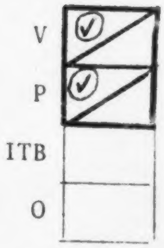


IV. Daughter is the focus.

A. Independent Task Behavior, appropriate



B. Physical Give, neutral;
Verbal Give, neutral, to mother



C. Independent Task Behavior, inappropriate

| | |
|---|---|
| V | |
| P | |
| ITB | 5 |
| O | |

## PROJECT INTERACT

### Observational Code Training Tape

Start: feet = 048; Finish: feet = 101

Tape 2 - Sequence A -- Segment 1

| Sequence # | Subject | Behavior |
|---|---|---|
| M-1 | Mother | OK. Come on. Let's turn all the things over. Put all the letters up (to both children). |
| M-2 | | OK? Whose turn is first? Who's going first? (to both children). |
| Co-1 | | (Constanza jumps up and down and points to herself). |
| M-3 | Mother | Constanza. |
| M-4 | | OK. Throw one down. See if you can get one to turn over (to Constanza). |
| Co-2 | Constanza | (Constanza throws). |
| M-5 | Mother | No. |
| M-6 | | Kara |
| Ca-1 | Kara | (Kara throws and misses). |
| M-7 | Mother | Uh-uh (to Kara). |
| M-8 | | (Hands bean bag to Kara). |
| M-9 | | My turn (to Kara). |
| M-10 | | (Throws). |
| Co-3 | | (Constanza walks away from game). |
| M-11 | Mother | Constanza, your turn again. |
| M-12 | | Constanza...try to get one over. |
| Co-4 | Constanza | (Constanza comes over). |
| Co-5 | | (She turns one over by hand). |

| Sequence # | Subject | Behavior |
|---|---|---|
| M-13 | Mother | Hey (to Constanza). |
| M-14 | | (Mother puts arm in front of Constanza. She then holds Constanza's wrist). |
| M-15 | | Throw it. OK. I don;t want you to get on top of it. I want you to be a little ways away from it. And then...(to Constanza). |
| Co-6 | Constanza | (Constanza throws and turns one over). |
| M-16 | Mother | Better. See, you get it over that way (to Constarza) |
| M-17 | | Kara, your turn. |
| M-18 | | See if you can turn one over (to Kara). |
| Ca-2 | Kara | (Kara throws and misses). |
| M-19 | Mother | Not quite (to Kara). |
| M-20 | | (Mother throws her bean bag to Kara. |
| Ca-3 | Kara | Hey. Thank you for...(to Mother). |
| M-21 | Mother | My turn. I turned one over (to Kara) |
| Co-7 | Costanza | Hey. Look what I found (to Mother). |

| Sequence # | Subject | Behavior |
|---|---|---|
| Co-8 | | A kitchen (to Mother). |
| M-22 | Mother | Constanza, your turn. |
| M-23 | | Now, throw it. |
| Co-9 | Constanza | (Constanza misses). |
| Ca-4 | Kara | Not quite (to Constanza). |
| M-24 | Mother | Not quite (to Constanza). |
| M-25 | | Kara, are you going to get an X or an 0? (to Kara). |
| Ca-5 | Kara | I want to get an 0 (to Mother). |
| M-26 | Mother | OK.. See if you can do it (to Kara). |
| Ca-6 | Kara | (Kara misses). |
| M-27 | Mother | Missed! (to Kara). |
| M-28 | | You didn't even hit the board (to Kara). |
| M-29 | Mother | (Mother throws bag). |
| M-30 | | Nothing (to group). |
| M-31 | | Constanza, X or an 0? (to Constanza). |
| Co-10 | Constanza | X (to Mother). |
| Co-11 | | (Constanza throws). |
| M-32 | Mother | Almost (to Constanza). |
| M-33 | | Kara (to Kara). |
| Ca-7 | Kara | (Kara misses). |
| M-34 | Mother | No (to Kara). |
| M-35 | | My turn (to Kara). |
| M-36 | | (Mother throws and misses). |
| Ca-8 | Kara | I hit the board (to Mother). |
| M-37 | Mother | Nothing (to group). |

| Sequence # | Subject | Behavior |
|---|---|---|
| Ca-9 | Kara | (Kara throws bag to Mother). |
| M-38 | Mother | Thank you (to Kara). |
| Ca-10 | Kara | You're Welcome (to Mother). |
| M-39 | Mother | Constanza. |
| M-40 | | (Mother touches Constanza's arm). |
| Co-12 | Constanza | (Constanza misses). |
| M-41 | Mother | Nope (to Constanza). |
| M-42 | | This is pretty hard, huh? (to group). |
| M-43 | | Kara, your turn (to Kara). |
| Ca-11 | Kara | (Kara misses, bean bag falls). |
| Co-13 | Constanza | You missed (to Kara). |
| M-44 | Mother | Can you catch? (to Kara). |
| M-45 | | (Mother throws it to her. Kara tries to catch and misses). |
| Ca-12 | Kara | Missed! (to Mother). |
| M-46 | Mother | My turn? (to Kara). |
| Ca-13 | Kara | Yes (to Mother). |
| M-47 | Mother | (Throws and misses). |
| M-48 | | No. Not quite (to Kara). |
| Ca-14 | Kara | (Kara throws bag to Mother and hits Constanza). |
| M-49 | Mother | OK. Constanza. |
| Co-14 | Constanza | (Throws and misses). |

Training Tape Codes
Tape 2 - Sequence A - Segment 1: Focal subject = 01
Page 1

| Sequence # | Code |
|---|---|
| M-1 | 119937 |
| M-2 | 119917 |
| Co-1 | 430373 |
| M-3 | 110377 |
| M-4 | 110327 |
| Co-2 | 430373 |
| M-5 | 140377 |
| M-6 | 110477 |
| Ca-1 | no code |
| M-7 | 140477 |
| M-8 | 310477 |
| M-9 | 110477 |
| M-10 | 539777 |
| Co-3 | no code |
| M-11 | 110377 |
| M-12 | 110327 |
| Co-4 | 430373 |
| Co-5 | no code |
| M-13 | 140377 |
| M-14 | 340377 |
| M-15 | 110326 |
| Co-6 | 430373 |
| M-16 | 120377 |
| M-17 | 110477 |
| M-18 | 110427 |
| Ca-2 | 430473 |
| M-19 | 120477 |
| M-20 | 310477 |
| Ca-3 | 220477 |
| M-21 | 110477 |
| Co-7 | 210327 |
| Co-8 | 210377 |
| M-22 | 110377 |
| M-23 | 110327 |
| Co-9 | 430373 |
| Ca-4 | no code |
| M-24 | 120377 |
| M-25 | 110417 |
| Ca-5 | 210473 |
| M-26 | 120427 |
| Ca-6 | 430473 |
| M-27 | 110477 |
| M-28 | 160477 |
| M-29 | 539777 |
| M-30 | 119977 |
| M-31 | 110317 |
| Co-10 | 210373 |
| Co-11 | no code |

Training Tape Codes
Tape 2 - Sequence A - Segment 1: Focal subject = 01
Page 2

| Sequence # | Code |
|---|---|
| M-32 | 120377 |
| M-33 | 110477 |
| Ca-7 | no code |
| M-34 | 140477 |
| M-35 | 110477 |
| M-36 | 539777 |
| Ca-8 | 210477 |
| M-37 | 119977 |
| Ca-9 | 410477 |
| M-38 | 120477 |
| Ca-10 | 220477 |
| M-39 | 110377 |
| M-40 | 320377 |
| Co-12 | no code |
| M-41 | 110377 |
| M-42 | 119977 |
| M-43 | 110477 |
| Ca-11 | no code |
| Co-13 | no code |
| M-44 | 110417 |
| M-45 | 430473 |
| Ca-12 | 210477 |
| M-46 | 110417 |
| Ca-13 | 210473 |
| M-47 | 539777 |
| M-48 | 120477 |
| Ca-14 | no code |
| M-49 | 110377 |
| Co-14 | no code |

## Data Collection Procedures

### Before Leaving Campus

1. Arrange for University car for the week.
2. Check cassette recorder for the following items:
    - a. Be sure you have the necessary number of tapes for the evening.
    - b. Check each tape to be sure it is functioning correctly.
    - c. Check each tape to be sure it is completed rewound.
    - d. Make sure the recorder volume control button is set at "5" at all times.
    - e. Make sure you have power cords or batteries.
    - f. Make sure you have an extension cord.
3. Pick up toys
    - a. Day 1
        - 1) Lincoln Logs
        - 2) Ring Toss
        - 3) Discussion cards
    - b. Day 2
        - 1) Tinker toys
        - 2) Bean bag game
        - 3) Set of four puzzles
    - c. Day 3
        - 1) Legos
        - 2) Garbage game
        - 3) Set of four pictures
    - d. Day 4
        - 1) Construction blocks
        - 2) Bean bag game
        - 3) Discussion cards
4. Stopwatches
    - a. Each team needs one stopwatch
    - b. Make sure stopwatch is functioning properly
5. Research Measures - be sure to take sharpened pencils for parental use.
    - a. Day 1
        - 1) Parental perceptions of children
        - 2) Enter each child's name before reaching the home
    - b. Day 2: Marital Adjustment Measure, one for each parent.

   c. Day 3: Schedule of Recent Experiences, one for each parent.
   d. Day 4: Cornell Medical Index, one for each parent.

6. Directions to home
   a. A county map and directions
   b. Family name and description
7. Randomization Procedures
8. Cash payment on the 4th day

## Data Collection Procedures

### At the Home

1. Entering the home

    a. One member of team introduces team as the expected University students and presents studen ID's. Second team member carries equipment. The person doing the introduction will be the team leader for the week and will do most of the communicating with the family.

    b. Be sure you are introduced or introduce yourselves to each family member. Avoid long discussions or conversations before beginning observation.

    c. Explain equipment after introductions.

2. Instructions to the family

    a. The don'ts: In as positive a fashion as possible explain the following rules:

        1) No t.v.
        2) No leaving the room while tasks or discussions are in progress.
        3) No talking with observers while tasks or discussions are in progress.
        4) If telephone rings or someone should come to the door, ask the parents to tell the caller to telephone or return at a later time. Turn off equipment until return.
        5) Please, observers and/or families should not eat or drink during coding.

    b. To do's:

        1) Explain that there will be 5-minute breaks between tasks and if questions arise, they will be answered at this time.

        2) Give the following explanations before each task:

            a. During the construction task, families should attempt to cooperate and build something together. At this time explain that each segment of the entire observation session will take approximately 15-20 minutes. When time is up, the observers will signal the family and the family will be instructed to clean up the toys when the signal is given. Remember to code mother and father as focal subjects for one minute each during clean-ups on construction tasks. If time runs out and children do not want to stop playing, explain to the children that they may play with some toy while their parents answer questions after the observation sessions.

            b. During the skill task, families may select to play the game in any manner they so choose.

c. Discussion/Story-telling/Puzzles

(1) During discussion sessions, families are encouraged to interact freely as they desire. However, if they tire of the first discussion topic they may turn the next discussion card face up and continue with the new topic. Discussion cards are to be placed facedown within easy reach of family members.

(2) When puzzles are used, four puzzles are to be placed in front of the family. Families are asked to choose and construct a puzzle together. If they complete one, they may go on to another until time runs out.

3. Administering measures after observation

a. Parental perceptions of children

1) Ask parents to complete forms independently.
2) Be sure each parent completes a form for each child.

b. Marital Adjustment Measure - have each parent complete this form independently.

c. Schedule of Recent Experiences - same instructions as for Marital Adjustment Measure.

d. Cornell Medical Index - same instructions as for Marital Adjustment Measure.

4. Leaving the home

a. Be sure to thank both parents and children for their help and participation and express that you look forward to returning the next evening.

b. If the family is greatly upset by the end of the evening, try to calm the situation quickly, but do not engage in extensive therapeutics. Use around 10 minutes as an estimate of the total time that should be expended on any effort to quiet the family. If at the end of that time, you are still uneasy about the family situation, leave and then call Project Director.

c. After the final observation session, give the family their payment; $20 to the mother and $20 to the father.

d. Answer any questions about the research which the family may have. Explain that our study is an attempt to understand how families interact in their own homes. Finally, explain that measures about health, family history, and so on were taken in order to help us understand how these factors influece family interactions.

Family #________________ Person completing this form____________________________

## Schedule of Recent Experience - Part A

| | 0 | 1 | 2 | 3 | 4 or more |
|---|---|---|---|---|---|
| 1. How many different times have you been married? | ☐ | ☐ | ☐ | ☐ | ☐ |
| 2. How many different times have you been divorced? | ☐ | ☐ | ☐ | ☐ | ☐ |
| 3. Have you lost any spouse by death? | ☐ | ☐ | ☐ | ☐ | ☐ |

4. How many years have you lived at your present home?

- ☐ 1 year
- ☐ 2 years
- ☐ 3-4 years
- ☐ 5-9 years
- ☐ 10 or more years

5. How many times have you moved in the last 5 years?

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7
- ☐ 8
- ☐ 9 or more

6. What is your religious preference?

- ☐ Protestant
- ☐ Catholic
- ☐ Jewish
- ☐ Other
- ☐ None

7. Where were you born?

- ☐ USA
- ☐ West Europe
- ☐ East Europe
- ☐ Asia
- ☐ Africa
- ☐ Australia
- ☐ New Zealand
- ☐ Canada
- ☐ South America
- ☐ Central America

8. Where was your father born?

- ☐ USA
- ☐ West Europe
- ☐ East Europe
- ☐ Asia
- ☐ Africa
- ☐ Australia
- ☐ New Zealand
- ☐ Canada
- ☐ South America
- ☐ Central America

9. Where was your mother born?

- ☐ USA
- ☐ West Europe
- ☐ East Europe
- ☐ Asia
- ☐ Africa
- ☐ Australia
- ☐ New Zealand
- ☐ Canada
- ☐ South America
- ☐ Central America

| 10. How old were you when your mother died? | How old were you when your father died? |
|---|---|
| ( ) mother living | ( ) mother living |
| ( ) 0-5 years | ( ) 0-5 years |
| ( ) 6-10 years | ( ) 6-10 years |
| ( ) 11-15 years | ( ) 11-15 years |
| ( ) 16-20 years | ( ) 16-20 years |
| ( ) 20 or more years | ( ) 20 or more years |

11. Which area of the country has been your home most of your life?

( ) East
( ) South
( ) Southwest
( ) Midwest
( ) Rocky Mountains
( ) Alaska
( ) Pacific Coast
( ) Hawaii
( ) Other

12. About how many people lived in the place where you were born?

( ) Less than 5,000
( ) 5,000-25,000
( ) 26,000-50,000
( ) More than 50,000
( ) More than 500,000

13. About how many people live in the area(s) where you have spent most of your life?

( ) Less than 5,000
( ) 5,000-25,000
( ) 26,000-50,000
( ) More than 50,000
( ) More than 500,000

## Schedule of Recent Experience - Part B

Listed below are changes you may have experienced within the last three (3) years. For each numbered question:

1. Think back on the item event and decide if it happened to you and when it happened.
2. If the event in question did happen in any of the time periods, mark the answer by putting a check in the "yes" bracket in the appropriate time period. Y means Yes.
3. If the event in question did not happen in any of the time periods, mark the answer by putting a check in the "no" bracket in the appropriate time period. N means No.

When in doubt of the event happening, then mark in the "yes" bracket. If you are not certain of the time period, do not worry; just try to be as close as possible. There must be a mark in each time period.

Example:
Item No. (Trouble with boss)
1

| 0-6 months ago | 6 months to 1 yr. ago | 1-2 yrs. ago | 2-3 yrs. ago |
|---|---|---|---|
| [✓ (Y)] (N) | (Y) [✓ (N)] | (Y) [✓ (N)] | [✓ (Y)] (N) |

This means that you have had trouble with the boss in the last 6 months and between 2 and 3 years ago, but not 6 months to a year ago or 1 to 2 years ago.

| | 0-6 months ago | 6 months to 1 yr. ago | 1-2 yrs. ago | 2-3 yrs. ago |
|---|---|---|---|---|
| 1. A lot more or a lot less trouble with the boss. | (Y) (N) | (Y) (N) | (Y) (N) | (Y) (N) |
| 2. A major change in sleeping habits (sleeping a lot more or a lot less, or change in part of day when asleep | (Y) (N) | (Y) (N) | (Y) (N) | (Y) (N) |
| 3. A major change in eating habits (a lot more or a lot less food intake, or very different meal hours or surroundings). | (Y) (N) | (Y) (N) | (Y) (N) | (Y) (N) |
| 4. A change in your personal habits (dress, manner, associations, etc.). | (Y) (N) | (Y) (N) | (Y) (N) | (Y) (N) |

| | | 0-6 months ago | 6 months to 1 yr. ago | 1-2 yrs. ago | 2-3 yrs. ago |
|---|---|---|---|---|---|
| 5. | A major change in your usual type and/or amount of recreation. | (Y) (N) | (Y) (N) | (Y) (N) | (Y) (N) |
| 6. | A major change in your social activities (e.g., clubs, dancing, movies, visiting, etc.) | (Y) (N) | (Y) (N) | (Y) (N) | (Y) (N) |
| 7. | A major change in church activities (e.g,. a lot more or a lot less than usual). | (Y) (N) | (Y) (N) | (Y) (N) | (Y) (N) |
| 8. | A major change in number of family-get-togethers (e.g., a lot more or a lot less than usual). | (Y) (N) | (Y) (N) | (Y) (N) | (Y) (N) |
| 9. | A major change in financial state (e.g., a lot worse off or a lot better off than usual). | (Y) (N) | (Y) (N) | (Y) (N) | (Y) (N) |
| 10. | In-law troubles. | (Y) (N) | (Y) (N) | (Y) (N) | (Y) (N) |
| 11. | A major change in the number of arguments with spouse (e.g., either a lot more or a lot less than usual regarding child-rearing, personal habits, etc.) | (Y) (N) | (Y) (N) | (Y) (N) | (Y) (N) |
| 12. | Sexual difficulties. | (Y) (N) | (Y) (N) | (Y) (N) | (Y) (N) |

This section o: Part B is similar to the last except that the question now asks you to ndicate the number of times that an item event happened in each of the appropriate time eriods.

Each of the time period columns has brackets numbered 0, 1, 2, 3, 4+. The last, 4+, eans 4 or more. These numbers represent the number of times the event happened. If he event did not happen, mark the "0" bracket. There must be a mark in each time period.

xample:

| Item No. | (Change in residence) | | | |
|---|---|---|---|---|
| 19 | 0-6 months ago | 6 mo.-1 yr. ago | 1-2 yrs. ago | 2-3 yrs ago |
| | 0 1 2 3 4+<br>( )(✓)( )( )( ) | 0 1 2 3 4+<br>( )( )(✓)( )( ) | 0 1 2 3 4+<br>(✓)( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )(✓)( ) |

This means that you changed residence once in the last 6 months, twice 6 months to year ago, three times between 2 and 3 years ago, but did not change residence 1 to 2 years ago.

| | 0-6 months ago | 6 mo.-1 yr. ago | 1-2 yrs. ago | 2-3 yrs. ago |
|---|---|---|---|---|
| 3. You experienced major personal injury or illness. | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) |
| 14. You have lost a close family member (other than spouse) by death. | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) |
| 15. You have experienced the death of spouse. | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) |
| 6. You have experienced the death of a close friend. | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) |
| 17. You have gained a new family member (e.g., through birth, adoption, oldster moving in, etc.) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) |
| 18. A major change in the health or behavior of a family member. | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) |

| | 0-6 months ago | 6 mo.-1 yr. ago | 1-2 yrs. ago | 2-3 yrs. ago |
|---|---|---|---|---|
| 19. You have had a change in residence. | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) |
| 20. You have experienced detention in jail or other institution. | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) |
| 21. Have you been found guilty of minor violations of the law (e.g., traffic tickets, jay walking, disturbing the peace, etc.) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) |
| 22. You have undergone a major business readjustment (e.g., merger, reorganization, bankruptcy, etc.) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) |
| 23. You married. | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) |
| 24. You were divorced. | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) |
| 25. You had marital separation from your mate. | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) |
| 26. You had an outstanding personal achievement. | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) |
| 27. A son or daughter left home. | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) |
| 28. You retired from work. | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) |
| 29. A major change in working hours or conditions. | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) |
| 30. A major change in responsibilities at work (e.g., promotion, lateral transfer). | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) |

| | 0-6 months ago | 6 mo.-1 yr. ago | 1-2 yrs. ago | 2-3 yrs. ago |
|---|---|---|---|---|
| 31. You have been fired from work. | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) |
| 32. A major change in living conditions (building a new home, remodeling, deterioration of home or neighborhood.) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) |
| 33. Your wife began or ceased working outside the home. | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) |
| 34. You took on a mortgage greater than $10,000 (e.g., purchasing a home, business, etc.) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) |
| 35. You took on a mortgage or loan less than $10,000 (e.g., purchasing a car, t.v., freezer, etc.). | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4 +<br>( )( )( )( )( ) |
| 36. You experienced a foreclosure on a mortgage or loans. | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) |
| 37. You have taken a vacation. | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) |
| 38. You have changed to a new school. | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) |
| 39. You have changed to a different line of work. | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) |
| 40. You have begun or ceased formal schooling. | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) |
| 41. You had a marital reconciliation with your mate. | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) |
| 42. You had a pregnancy. | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) | 0 1 2 3 4+<br>( )( )( )( )( ) |

## SURVEY on BRINGING UP CHILDREN

Fact Sheet    Family Number__________

Please write the number which corresponds to your response on the line to the right of the question.

1. Were you separated from your mother before the age of 11 years? ________

   1-yes    2-no

2. When you were a child did you have a pet? ________

   1-yes    2-no

3. When you "got out of hand" as a child, how were you punished? ________

   1-none    2-physical punishment    3-non-physical punishment

4. Have you ever been seriously ill? ________

   1-yes    2-no

5. Have you ever lost a very close relative or friend by death? ________

   1-yes    2-no

6. Is your telephone number listed in the telephone directory? ________

   1-yes    2-no    3-I don't have a phone

For women only

7. Have you ever had a Caesarian Section? ________

   1-yes    2-no    3-never had a baby

8. Did anyone ever tell you when you were born your mother's pregnancy or delivery was very difficult? ________

   1-yes    2-no

| | Never | Rarely | Some times | Often | Always |
|---|---|---|---|---|---|
| 9. Do you visit with friends or relatives in the area? | ( ) | ( ) | ( ) | ( ) | ( ) |
| 10. Do you avoid participation in community organizations? | ( ) | ( ) | ( ) | ( ) | ( ) |
| 11. Do(es) your child(ren) play with friends? | ( ) | ( ) | ( ) | ( ) | ( ) |
| 12. Do you enjoy going to parties or other social events? | ( ) | ( ) | ( ) | ( ) | ( ) |
| 13. Do you feel children should have activities away from home and school? | ( ) | ( ) | ( ) | ( ) | ( ) |
| 14. Do you avoid parties or other social events? | ( ) | ( ) | ( ) | ( ) | ( ) |
| 15. Do you feel children should spend their free time in the home with the family? | ( ) | ( ) | ( ) | ( ) | ( ) |

Family #________ Person completing this questionnaire______________________________

In general, would you say that

____________________________ is:

| | Never | Rarely | Sometimes | Often | Always |
|---|---|---|---|---|---|
| a. Active, vigorous | ☐ | ☐ | ☐ | ☐ | ☐ |
| b. Friendly | ☐ | ☐ | ☐ | ☐ | ☐ |
| c. Unattractive | ☐ | ☐ | ☐ | ☐ | ☐ |
| d. Affectionate | ☐ | ☐ | ☐ | ☐ | ☐ |
| e. Demanding | ☐ | ☐ | ☐ | ☐ | ☐ |
| f. Easy to satisfy | ☐ | ☐ | ☐ | ☐ | ☐ |
| g. Stubborn | ☐ | ☐ | ☐ | ☐ | ☐ |
| h. Odd, strange | ☐ | ☐ | ☐ | ☐ | ☐ |
| i. Cooperative | ☐ | ☐ | ☐ | ☐ | ☐ |
| j. Moody | ☐ | ☐ | ☐ | ☐ | ☐ |
| k. Physically coordinated | ☐ | ☐ | ☐ | ☐ | ☐ |
| l. Cold toward you | ☐ | ☐ | ☐ | ☐ | ☐ |
| m. Helpful | ☐ | ☐ | ☐ | ☐ | ☐ |
| n. Clumsy | ☐ | ☐ | ☐ | ☐ | ☐ |
| o. Alert, intelligent | ☐ | ☐ | ☐ | ☐ | ☐ |
| p. Cheerful | ☐ | ☐ | ☐ | ☐ | ☐ |
| q. Slow to learn | ☐ | ☐ | ☐ | ☐ | ☐ |
| r. Hostile | ☐ | ☐ | ☐ | ☐ | ☐ |
| s. Sluggish or listless | ☐ | ☐ | ☐ | ☐ | ☐ |
| t. Handsome or pretty | ☐ | ☐ | ☐ | ☐ | ☐ |
| u. Like most children his/her age | ☐ | ☐ | ☐ | ☐ | ☐ |
| v. Destructive | ☐ | ☐ | ☐ | ☐ | ☐ |

Family #__________________ Person Completing This Questionnaire________________________

Most persons have disagreements in their relationships. For the past year, please indicate below the approximate extent of agreement or disagreement between you and your partner for each item on the following list.

| | Always Agree | Almost Always Agree | Occasionally Disagree | Frequently Disagree | Almost Always Disagree | Always Disagree |
|---|---|---|---|---|---|---|
| 1. Handling family finances | | | | | | |
| 2. Matters of recreation | | | | | | |
| 3. Religious matters | | | | | | |
| 4. Demonstrations of affection | | | | | | |
| 5. Friends | | | | | | |
| 6. Sex relations | | | | | | |
| 7. Conventionality (correct or proper behavior) | | | | | | |
| 8. Philosophy of Life | | | | | | |
| 9. Ways of dealing with parents or in-laws | | | | | | |
| 10. Aims, goals, and things believed important | | | | | | |
| 11. Amount of time spent together | | | | | | |
| 12. Making major decisions | | | | | | |
| 13. Household tasks | | | | | | |
| 14. Leisure time interests and activities | | | | | | |
| 15. Career decisions | | | | | | |
| 16. Child-rearing decisions | | | | | | |

Again, thinking about the past year:

| | All the time | Most of the time | More often than not | Occasionally | Rarely | Never |
|---|---|---|---|---|---|---|
| 17. How often have you discussed or considered divorce, separation, or terminating your relationship? | ____ | ____ | ____ | ____ | ____ | ____ |
| 18. How often do you or your mate leave the house after a fight? | ____ | ____ | ____ | ____ | ____ | ____ |
| 19. In general, how often do you think that things between you and your partner are going well? | ____ | ____ | ____ | ____ | ____ | ____ |
| 20. Do you confide in your mate? | ____ | ____ | ____ | ____ | ____ | ____ |
| 21. Do you ever regret that you entered into a relationship with your mate? | ____ | ____ | ____ | ____ | ____ | ____ |
| 22. How often do you and your partner quarrel? | ____ | ____ | ____ | ____ | ____ | ____ |
| 23. How often do you and your mate "get on each other's nerves?" | ____ | ____ | ____ | ____ | ____ | ____ |
| 24. Are you ever afraid of your mate? | ____ | ____ | ____ | ____ | ____ | ____ |
| 25. Can you depend on your partner to support you when you have serious problems? | ____ | ____ | ____ | ____ | ____ | ____ |

| | Every Day | Almost Every Day | Occasionally | Rarely | Never |
|---|---|---|---|---|---|
| 26. Do you kiss your mate? | ____ | ____ | ____ | ____ | ____ |

| | All of them | Most of them | Some of them | Very few of them | None of them |
|---|---|---|---|---|---|
| 27. Do you and your mate engage in outside interests together? | ____ | ____ | ____ | ____ | ____ |

How often would you say the following events occur between you and your mate?

| | Never | Less than once a month | Once or twice a month | Once or twice a week | Once a day | More often |
|---|---|---|---|---|---|---|
| 28. Have a stimulating exchange of ideas | ____ | ____ | ____ | ____ | ____ | ____ |
| 29. Laugh together | ____ | ____ | ____ | ____ | ____ | ____ |
| 30. Calmly discuss something | ____ | ____ | ____ | ____ | ____ | ____ |
| 31. Work together on a project | ____ | ____ | ____ | ____ | ____ | ____ |

These are some things about which couples sometimes agree and sometimes disagree. Indicate if either item below caused differences of opinions or were problems in your relationship during the past few weeks. (Check yes or no)

| | Yes | No | |
|---|---|---|---|
| 32. | ____ | ____ | Being too tired for sex. |
| 33. | ____ | ____ | Not showing love. |

34. The dots on the following line represent different degrees of happiness in your relationship. The middle point, "happy," represents the degree of happiness of most relationships. Please circle the dot which best describes the degree of happiness, all things considered, of your relationship.

| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| . | . | . | . | . | . | . |
| Extremely Unhappy | Fairly Unhappy | A Little Unhappy | Happy | Very Happy | Extremely Happy | Perfect |

35. Which of the following statements best describes how you feel about the future of your relationship? (Please check one)

____ I want desperately for my relationship to succeed, and would go to almost any length to see that it does.
____ I want very much for my relationship to succeed, and will do all I can to see that it does.
____ I want very much for my relationship to succeed, and will do my fair share to see that it does.
____ It would be nice if my relationship succeeded, but I can't do much more than I am doing now to help it succeed.
____ It would be nice if it succeeded, but I refuse to do any more than I am doing now to keep the relationship going.
____ My relationship can never succeed, and there is no more that I can do to keep the relationship going.

| | Never | Once | Twice | Three or more Times |
|---|---|---|---|---|
| 3[illegible]. During the past year, how many times have you and your mate left the house for one night or more in anger? | _____ | _____ | _____ | _____ |

[illegible]w, think about this past week:

37. During the past week, about how many times has your mate behaved toward you in a way which

pleased you? ________

displeased you? ______

[illegible]. During the past week, about how many times has your partner behaved toward your child(ren) in a way which

pleased you? ______

displeased you? _____

Family #___________ Date: ______________________________

Observer #__________

Please rate the house on the following dimensions:

Extremely Messy — Extremely Neat

1 2 3 4 5 6 7

Extremely Dirty — Extremely Clean

1 2 3 4 5 6 7

Extremely Comfortable — Extremely Uncomfortable

1 2 3 4 5 6 7

Extremely Warm — Extremely Cold

1 2 3 4 5 6 7

Extremely Crowded — Extremely Spacious

1 2 3 4 5 6 7

Well-differentiated — Extremely Undifferentiated

1 2 3 4 5 6 7

Child-Proof — Dangerous to Children

1 2 3 4 5 6 7

Please note general impressions and anything unusual about the house, furnishings, yard, etc.

Please supply narrative information on this family which you feel is either not adequately covered elsewhere or which is supplemental to other materials.

## APPENDIX F - 1

## INFORMATION FOR PARENTS

The ______________________________________ (name of agency) has received a request from Dr. Robert Burgess of The Pennsylvania State University for permission to ask several groups of parents or parent figures to participate in a study. He has asked to contact parents who are or have been involved with this agency.

The study has two purposes, the first being to find out how families interact as a unit in the home while engaged in various tasks. This interaction will be related to the developmental level of the children, to parental health, to employment or financial problems as well as to perceptions, values and attitudes of the parents. The second purpose of this study is to assist this agency in helping you. The more that is known about parents and how they handle their childrearing tasks, the more it will be possible to provide ways of helping them with such efforts. Information will be exchanged between ______________________________________ (name of agency) and Project Staff to accomplish this purpose.

This study will take 20 to 30 hours of your time for which you each will be paid $5.00 for each completed visit. The study will take place in your home so you will not have to travel to any agency to participate. The 20 to 30 hours of your time will be spent in the following ways:

1. There will be a total of twenty 1 to 1½ hour visits to your home. These 20 visits will take place over the next four months. During these visits, your family will be asked to perform a simple task or play a simple game as a family. At other times, your family will be visited while you are having a meal and while you are participating in other daily activities. Two observers will record the way you interact during this time on a small hand-held device.

2. In addition, you will be asked to fill out some questionnaires concerning family functioning and answer some questions about how you perceive the behavior of other family members. The children will be given short tests to assess their developmental stages and questions will be asked to determine general parental health. Some of these materials may be collected at times other than the observation visits.

3. Finally, the researchers would like to have you identify any behaviors of your children or your spouse that you would like changed. For example, your child may not pick up his/her clothing and toys as often as you would like, or maybe you would like your spouse to be more loving toward you. Dr. Burgess' staff will discuss any behaviors you would like changed, and then proceed to help you and your spouse or children learn how to change their behavior.

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Participation in the project is entirely voluntary and any person may drop out of the project at any time. Nothing that you tell anyone on the project and none of your other responses will be revealed to anyone unless this is discussed with you. None of the research staff who visits your home will know that you are a client of this agency. The only exception to this rule will be the Project Director who will be introduced to you by your caseworker in order to answer any questions you may have about the study. All results of the study will be published as grouped findings, so you will not be identified. You will be given a code number, but only the Project Director will know what the classification of each number is. The list of names will be destroyed as soon as the study is completed. You will have the opportunity after the study is completed to see the results of any information gathered on your family.

If at all possible, this agency would like to cooperate with Dr. Burgess. To do so, we need your voluntary and written permission. Dr. Burgess and his research staff have signed a Confidentiality Pledge making it as certain as possible that your right to privacy will be protected.

We are hereby asking your permission to have the Project Director contact you. Please bear in mind that this permission must be entirely voluntary on your part and that your agreement to participate in the study or your refusal to participate will have no effect whatever on your eligibility for any services that this agency provides, now, or in the future. Further, if anything in this letter is unclear to you or if you wish additional information on the proposed study, any questions you have can be answered by the Project Director when he/she visits you with your caseworker.

On the basis of this information, I agree to have the Project Director visit in my home with my caseworker at which time I will decide whether to participate in the study.

| | |
|---|---|
| Signature of Mother or Mother Figure | Date |
| Signature of Father or Father Figure | Date |
| Home Address (street and number) | Telephone |
| City, Town | Zip Code |
| Witness | Date |

## APPENDIX F - 2

## STATEMENT OF INFORMED CONSENT

We, the undersigned, have carefully read the letter from ______________ ________________________ (name of agency) which was shown to us by ________________________ (name of worker) on ____________________ (date). This letter described the research study planned by Dr. Robert Burgess from The Pennsylvania State University and asked our permission for the Project Director to contact us about the study.

We realize that our participation will take approximately 20 to 30 hours. We understand that all information will be collected in our home except for materials exchanged between this agency and the Project Director. We understand that each parent will receive $5.00 for each completed home visit.

We also understand that information will be shared between the research staff and ________________________________ (name of agency). That is, information currently in our files will be used by the research staff and data collected by the research staff will be available to this agency in order to provide better services for us. The information to be taken from agency files will include: (1) the nature of and reasons for the contact between this agency and our family, (2) general demographic information concerning our family, e.g., education, income, and number of children, (3) information about the origins of our family and (4) medical information.

We understand that we will be observed in the home by two observers while engaged in some simple games or tasks as a family. We understand that we may be asked to fill out questionnaires concerning our attitudes and feelings about our work and our children. We understand that we will be asked about our perceptions of one another's behavior. We understand that our children will receive developmental testing and that information will be gathered on parental health. We understand that we may fill out a questionnaire that asks us about our background and that we may answer questions in an interview concerning our current life circumstances. We understand that we will be asked to list the behaviors of our family members that we would like changed. We understand that we and our family will cooperate with the Project Director and observers to alter these behaviors.

We understand that no information will be released to other agencies or persons without our written consent. We understand that we can ask questions at any time and that they will be answered. We also understand that we can refuse to answer any questions, refuse to be observed or withdraw from the study at any time.

We understand that families not involved with this agency will also be in the study, that we will be given code numbers and that none of the research staff, with the exception of the Project Director, will be told how to interpret the code; therefore, no one we meet who is collecting information about us will know of our contact with this agency. After the study is completed, all the material on which names appear will be destroyed.

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We understand that the researchers will not reveal any information obtained during the study that might identify us to anyone without first discussing it with us and that any written or oral reports of the study findings will contain no names of participants.

We understand that our participation in this study is entirely voluntary and that our agreement to participate in the study, refusal to participate or decision to drop out of the study after we have started will have no effect whatever on our eligibility for any services ______________________________ ______________________________(name of agency) provides, now or in the future.

On the basis of the above information, given us in the letter from ____________________________________________ (name of agency), we hereby give our permission to make arrangements for our participation in the study.

| | |
|---|---|
| Signature of the Mother or Mother Figure | Date |
| Signature of the Father or Father Figure | Date |
| Home Address (street and number) | Telephone |
| City, Town | Zip Code |
| Witness | Date |

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